THE DOMESTIC WORLD.

A Practical Guide

IN ALL THE DAILY DIFFICULTIES OF THE HIGHER BRANCHES OF DOMESTIC AND SOCIAL ECONOMY.

By the Author of

"ENQUIRE WITHIN."

LONDON:
HODDER & STOUGHTON,
27, PATERNOSTER ROW.
MDCCCLXXVIII.

Butler & Tanner,
The Selwood Printing Works,
Frome, and London.

PREFACE.



THIS volume is not brought out in rivalry to my other domestic books, but rather as a Supplement to them. It will embrace the higher branches of Domestic Economy, and will concern more the occupations for the parlour than the kitchen. The recent domestic enactments of Parliament will be clearly set forth, as well as the numerous new avenues of industry thrown open to ladies. Special articles will also be given on all the elegant arts or matters connected with the adornment of home. Garden occupations will be elaborately treated. The management of home "pets," in health and disease, has been carefully studied, and the instructions herein given are of the most reliable character. The Toilette and Etiquette of the most advanced kind will be found well worthy of attention by those solicitous about personal appearance or the graces of social intercourse. Instructions in those in-door and out-door games and exercises in which ladies and gentlemen can with propriety co-operate are fully and clearly given.

I have briefly summarised some of the leading topics of my new volume: but the general information with which it abounds is of so miscellaneous a description that I can only particularise the following subjects as an earnest of the rest:—Histories of Domestic Articles; Sanitary Laws; Health Resorts for all conditions of Ailments; Mechanics for Ladies; Calendar and Phenomena of the Seasons, &c., &c. I have designed "THE DOMESTIC WORLD" as a companion volume to my preceding popular works, not as a substitute for them, for the matter contained in this volume is entirely different from the contents of my others; and from this point of view it will be found a most valuable addition as a book of reference on all subjects connected with the refinement and happiness of home life.

THE DOMESTIC WORLD

A.—The commercial import of this letter is that it signifies "accepted;" @ is used for "at," and à for "to."

In Logic this letter denotes a universal affirmative proposition, as, A asserts, and E denies.

A in Music is the nominal of the sixth note in the natural diatonic scale, as well as the natural key in the minor mood. In the violin it is the open note of the second string, by which the other strings are regulated and tuned.

A 1 is a mark used to signify the first classification of ships at Lloyds'. Conventionally, this expression is used to denote anything of the superlative degree of excellence.

Accomplishments, Value of, to Married Women.—The greater part of a woman's life ought to be, and necessarily must be, passed at home; the more sedentary resources, therefore, she possesses, by which her time may be cheerfully occupied, the less will she suffer from any occasional privations of society, or even of health. Sometimes a husband is obliged to be frequently, and for long periods, absent from home. A commercial traveller, for example. In such cases, her acquirements and information may be as companions to her, whiling away the hours of solitude, which would otherwise be spent in indolence and discontent.

A medical man relates of a rich female patient, that she was daily exclaiming, "Oh! that I could sew!" She appeared to be surrounded with every gift of fortune, and yet was a miserable woman. At the time she was in the habit of expressing this humble wish she had passed the meridian of life, and although not actually an invalid, yet she was not strong enough to mingle in her gay circle. She therefore retired to her country seat, to live in comparative privacy. Thus, by necessity, banished from general society, she was completely at a loss for amusement suitable to her state and present situation. She was without any resource to kill time. In reading she had never delighted; she had long abandoned every accomplishment, and she had never known at any period of her life how to use the needle, so that from the time of the commencement of her retirement till her death she dragged on a miserable existence, wandering, with a dull and discontented spirit, about her splendid apartments, or driving through the park in her coronetted carriage, a daily, monotonous round.

Besides accomplishments being a resource of pleasure to married women themselves, by a due exercise of them they will attach a husband to his home and family circle, and promote the innocent amusement of young people and children. Men have so many out-door resources, that it is good policy, if nothing else, to make home attractive as well as comfortable. Domestic economy and home duties should not be made the constant theme of a woman's conversation. A man keeps his business worries to himself; and when he comes home he does not expect to be perplexed with domestic accidents, cheating of tradesmen, or misdemeanours of servants. Let his example be followed in all cases where advice, or support, or assistance is not absolutely necessary, and pleasant, cheerful themes be chosen, or some amusement selected which shall render the evening and leisure hours those of relaxation and enjoyment, and tend to

give a charm and zest to home, which no other place can possess. Whatever accomplishments were cultivated in earlier years should not be neglected when the sterner duties of domestic life afford opportunity.

Accounts.—Where credits are taken from tradespeople (which are best avoided where possible) great care will be necessary in keeping and checking the accounts. If there is any looseness or neglect in this matter it will soon be discovered, and the temptation to dishonesty be taken advantage of. Domestic accounts should be strictly examined and settled *weekly*, because the housekeeper's memory may then be of use in assisting to recollect all the articles which are charged, or to rectify any mistakes that may have occurred. It is a good plan, and serves as a check both on tradespeople and servants, to have books kept in the kitchen, in which every article is entered that is brought into the house. Each tradesman should enter in the book appropriated to him the quantity of the commodity, with its price, which has just been delivered; and his bill, if correct, should tally with his book. After these weekly settlings the amount should be entered in the housekeeping-book; and at the end of every month, this book should, in its turn, be added up, and the sum total entered into the cash-book. Thus your housekeeping-book shows you your current expenses for each week, and the cash-book the amount of the whole monthly, besides including every other expense that occurs to you. The cash-book should be balanced every three months; by which you cannot fail to discover whether you are keeping within bounds or exceeding the income upon which you propose to live. Every housekeeper should keep a strict account of all her expenditure, should see that each bill be receipted when paid, and file all receipts, and keep them for a year at least. The mistress should examine each bill herself, as thus she will detect, and can check, any inaccuracy on the part of the tradesmen, or extravagance on the part of her servants. Books for these purposes are kept by every stationer, and may be purchased for a few pence. (See *Marketing*.)

Adulterations. — "Adulteration," says Dr. Arthur Hill Hassall, the eminent analyst, "I find to prevail in nearly all articles that it will pay to adulterate." The doctor then enumerates the following articles, giving the ingredients that they are mixed or adulterated with :—

Annatto is adulterated with chalk, wheat flour, rye flour, salt, and soap for bulk and weight; for colour, it is adulterated with turmeric, a ferruginous earth, and, probably, with Venetian red and red lead.

Arrowroot, with sago, potato, and tapioca starches.

Anchovies are mixed with Dutch, French, and Sicilian fish, and sometimes these fish are passed off as the anchovy itself; bole Armenian and Venetian red are also added to colour the liquid which surrounds the fish.

Bread, with mashed potatoes, alum, "hards," and sometimes with sulphate of copper.

Butter, with water.

Bottled fruits and vegetables, with certain salts of copper, usually the sulphate or acetate.

Coloured confectionery, with East India arrowroot, wheat and potato flours, hydrated sulphate of lime; and coloured with cochineal, lake, indigo, Prussian blue, Antwerp blue, artificial ultramarine, carbonate of copper, or verditer, carbonate of lead, or white lead, red lead, vermilion, the chrome yellows, or chromates of lead, lemon, orange, deep gamboge, and various combinations of those pigments, and also bronze powders.

Coffee, with chicory, roasted wheat, rye and potato flours, roasted beans, mangel-wurzel, and a substance resembling acorns.

Chicory, with roasted wheat and rye flours, burnt beans, sawdust, carrots, mangel-wurzel; and coloured with ferruginous earths, as Venetian red and umber, and burnt sugar, sometimes denominated "black jack."

Cocoa and chocolate, with Maranta East India, and Tacca or Tahiti roots, tous-le-mois, the flours of wheat, Indian-corn, sago, potato, and tapioca, and various mixtures of these, sugar and

chicory; and coloured with Venetian red, red ochre, and other ferruginous earths.

Cayenne, with ground rice, mustard husks, deal sawdust, salt; and coloured with red lead and vermilion, or bi-sulphuret of mercury, Venetian red, and turmeric.

Custard and egg-powders, with wheat, potato and rice flours; coloured with chrome yellow, or chromate of lead, and turmeric.

Curry powder, with ground rice, potato farina, and salt; coloured with red lead.

Flour, with alum.

Ginger, with wheat, sago, and potato flours, and turmeric powder.

Gin, with water, sugar, cayenne, cassia or cinnamon, and flavourings of different kinds.

Rum, with water and cayenne pepper.

Isinglass, with gelatine.

Lard, with potato flour, water, salt, carbonate of soda, and caustic lime.

Mustard, with wheat flour and turmeric.

Milk, with water and annatto.

Marmalade, with pulp of apple or turnip.

Oatmeal, with barley flour and the integuments of barley, culled.

Porter and stout, with water, sugar, treacle, and salt.

Pickles, with salts of copper, usually the sulphate or acetate of copper.

Potted meats and fish, with flour, probably wheat flour boiled, coloured with bole Armenian, and sometimes with Venetian red.

Preserves, with salts of copper, including the acetate.

Pepper, with wheat and pea flours, ground rice, ground mustard seeds, linseed meal and pepper dust.

Snuff, with the chromates of potash, chromate of lead, ferruginous earths, chiefly umbers, red and yellow ochre, red lead, or oxide of lead, carbonate of ammonia, lime, powdered glass, or silex, and powdered orris root.

In sugar, wheat flour was found in two cases only; it is but rarely adulterated; potato flour and tapioca starch were also each found in one case.

Cinnamon is adulterated with cassia, wheat flour, sago meal, and mixtures of these, East India arrowroot and potato flour.

Pimento, with mustard husks.

Mixed spice, with wheat, sago, and potato flours, ground rice, and two vegetable substances, one of which resembled linseed.

Sauces, such as the essence of anchovies, lobsters and shrimps, and tomato, with red ferruginous earths, as bole Armenian and Venetian red.

Tea, with exhausted tea-leaves, leaves other than those of tea, British and foreign; among the former, those of sycamore, horse-chestnut, and plum; with lie tea, paddy husk, sand, and starch; coloured with plumbago, or black lead, gum, indigo, Prussian blue, turmeric, Chinese yellow, China clay, and soap-stone, or French chalk; and it is flavoured with sulphate of iron, catechu gum, la veno leno, and Chinese botanical powder.

Tobacco, with water, sugar, treacle, and salts of various kinds.

Vinegar, with sulphuric acid.

Ipecacuanha, with chalk, wheat flour, powdered wood and sands, and other vegetable substances.

Jalap, with powdered wood of two different kinds.

Opium, with poppy capsules, wheat flour, sugar, gum, powdered wood, and sand.

Scammony, with wheat flour, sugar, gum, sand, chalk, resins of guaiacum and jalap, sand and woody fibre.

"This list does not embrace nearly all the substances employed in the adulteration of articles of food, drink, and drugs especially; it contains those only, as already remarked, which have actually been discovered by myself in the several articles subjected to my analysis. As to the *accuracy* of the tests," adds the doctor, "there can be no question whatever upon this point. The results have been published from time to time, in connection with the names of the parties from whom the different articles were purchased; if, therefore, there had been any general inaccuracy in the results, it cannot be questioned for a moment but that some of those parties would have pro-

ceeded to show any error in the statements made. They were made regularly during a period of four years, and involved the publication of the names and addresses of many hundreds of manufacturers and traders."

Advent Sunday.—This festival of the Church, always the nearest Sunday to the feast of St. Andrew (Nov. 30), whether before or after Advent (literally the *coming*), is a term applied from an early period of ecclesiastical history to the four weeks preceding Christmas, which were observed with penance and devotion, in reference to the approaching birth of Christ. There are four Sundays in Advent, commencing with that, as we have remarked, nearest to the feast of St. Andrew.

Æolian Harp, To Make an.—Let a box be made of as thin deal as possible, of a length exactly answering to the window in which it is intended to be placed, four or five inches in depth, and five or six in width. Glue on it, at the extremities of the top, two pieces of wainscot about half an inch high and a quarter of an inch thick, to serve as bridges for the strings; and inside, at each end, glue two pieces of beech about an inch square, and of length equal to the length of the box which is to hold the pegs. Into one of these bridges fix as many pegs (such as are used in pianofortes, though not so large) as there are to be strings; and into the other fasten as many brass pins, to which attach one end of the strings. Then string the instrument with small catgut, or first fiddle strings, fixing one end of them and twisting the other round the opposite peg. These strings, which are not to be drawn tight, must be tuned in unison. To procure a proper passage for the wind, a thin board, supported by four pegs, is placed over the strings at about three inches from the sounding-board. The instrument must be exposed to the wind at a window partly open; and to increase the force of the current of air, either the door of the room or any opposite window should be opened. When the wind blows, the strings sound in unison; but as the force of the current increases, the sound changes into a pleasant admixture of all the notes of the diatonic scale, ascending and descending, and these often unite in the most delightful harmonic combinations.

Affectation.—The certain test of affectation in any individual is the looking, speaking, moving, or acting in any way different when in the presence of others, especially those whose opinion we regard, and whose approbation we desire, from what we should do in solitude, or in the presence of those only whom we disregard, or who we think cannot injure or benefit us. The motive for resisting affectation is, that it is both unsuccessful and weak. It always involves a degree of hypocrisy, which is exceedingly offensive, and is, moreover, generally detected, justly exposing a person to contempt, which could never have been excited by the mere absence of any quality or possession, as it is by the false assumption of what is not real.

Cumberland, the dramatist, in fitting terms, thus apostrophises Affectation, which Lavater defines as the attempt of poverty to appear rich:—

"Why, Affectation—why this mock grimace?
Go, silly thing, and hide that simpering face!
Thy lisping prattle, and thy mincing gait,
All thy false, mimic fooleries I hate;
For thou art Folly's counterfeit, and she
Who is right foolish hath the better plea:
Nature's true idiot I prefer to thee."

The best cure for affectation is the cultivation, on principle, of every good, virtuous, and amiable habit and feeling, not for the sake of being approved or admired, but because it is right in itself, and without considering what people will think of it. Thus a real character will be formed, instead of a part being assumed, and admiration and love will be spontaneously bestowed where they are really deserved. Artificial manners are easily seen through; and the result of such observations, however accomplished and beautiful the object may be, is contempt for such littleness.

The following passage from Cowper will show that the poet was exceedingly bitter against affectation:

"In man or woman, but far most in man,
And most of all in man that ministers,
And serves the altar, in my soul I loathe
All affectation; 'tis my perfect scorn;
Object of my implacable disgust!"

Agnes', Saint, Eve.—The annals of canonization in the Church of Rome present no image of greater purity and sweetness than St. Agnes. She is described as a very young and spotless maid, who suffered martyrdom in the tenth persecution under Diocletian, in the year 306. A few days after her death, her parents, going to her tomb, beheld a vision of angels (such is the legend), amidst which stood their daughter, with a snow-white lamb by her side. She is therefore usually represented with a lamb standing beside her. At Rome, on St. Agnes' Day (Jan. 21), during mass, and while the *Agnus* is being sung, two lambs, as white as snow, and covered with finery, are brought in and laid upon the altar. Their fleeces are afterwards shorn, and converted into palls, which are highly valued.

In England, as much as elsewhere, it was customary for young women on St. Agnes' Eve to endeavour to divine who should be their husbands. The proper rite was to take a row of pins and pull them out one after another, saying a pater-noster, and sticking one pin in the sleeve; then going to rest without food, their dreams were expected to present to them the image of their future husband.

Agreements.—For an amount of £20 or upwards, and less than 2,160 words, 2s. 6d.; if 2,160 words or upwards, then, in addition, 2s. 6d. for every 1,080 words after the first 1,080.

Under-hand only of the value of £5 or upwards, and not otherwise charged, 6d.

If the same contain 2,160 words or upwards, for every 1,080 over and above the first 1,080 words, a further progressive duty of 6d.

Deeds and instruments not enumerated, 5s. to £1 15s.

Air, Change of.—Few can exchange the air they usually live in for that of country or sea-shore residence, and not reap advantages. Inland dwellers do not require telling to go to the sea for change; and what people have done instinctively, science seems to confirm: for, going to the sea-shore and to the hill countries, they go to where ozone is most abundant. Ozone is the term applied to a newly-discovered principle, existing in greater or less intensity in the atmosphere; in greater, in those situations, as on the sea-shore or lofty mountains, where the air is most pure; in less, where, as in large cities, it is less pure. Health, especially in the feeble, is influenced for good by free exposure, not only to good air, but to the diffused light of day. We know not, even yet, how much the chemical rays of sunlight influence our physical well-being, so that the reader will do well to remember when we talk of getting plenty of fresh air, we mean plenty of sunlight as well. If we seek change of air as a duty, it must be our interest to get as much of the commodity as possible. One way, of course, is to be as much out in it as possible; but there is a difference "how we take the air," whether we go about it in an easy *laissez faire* fashion, which does not quicken a respiration or heart-beat; or whether by climbing, walking, running, &c., and by all the modes of exercise we can indulge in—now that we are from home, and have no dignity to support—we make the heart pump the blood through the lungs in double quick time, and make our respirations, as perforce we must, keep pace. And so one person goes to the seaside, and lolls on the beach or in the reading-room, and taking it easy, gets but half measure of the new air; whilst another, exercising himself, gets double measure and double good.—(See *Exercise*.)

Air, Method of Finding the Course of, when the Wind is Still.—Place a basin of water in a free expanse, throw a red-hot cinder into it, and observe how the smoke which it produces inclines. Sailors throw a piece of live coal into the sea for the same purpose; and also wet a finger, hold it up to the air, and then, by feeling which part becomes (by evaporation) cool, they judge of the direction of the current of air. An instrument on the last principle was invented a few years back by Mr. B. M. Forster.

All Fools' Day.—We need hardly say that this day of trifling occurs on the 1st of April, which has been from the most ancient times set

apart for the commission of various species of folly and practical joking. Its origin is unknown; but it is observed in many countries under different names. In France a person imposed upon on this day is styled *Un poisson d'Avril* (an April fish). In our country, such a person is called an April fool; in Scotland, a gowk, signifying a foolish person, and from the same root as the English word *gawky*. It is very remarkable that the Hindoos indulge in similar trifles on the 31st of March, which they call the Huli festival.

All Saints' Day.—This day is a festival of the Catholic and Protestant Churches. The former Church designed this day to be held in honour of all those saints who had not particular days appointed for them.

The eve of this day (31st of October) is called Hallowe'en, as being the eve of All-hallow Day.—See *Hallowe'en*.

Almanacks.—The derivation of the word "almanack" has given some trouble to grammarians. The most reasonable one appears to be from the two Arabic words *al*, the article, and *mana*, or *manah*, to count.

Scarcely anything is more familiar to the eyes of an Englishman than an almanack of some sort or other, whether in the shape of a sheet or book. We have all kinds and all sizes of almanacks, at all prices. Indeed, thousands are given away for advertising mediums. Every sect, denomination, and trade has now its almanack.

An almanack, in the modern sense of the word, is an annual publication giving the civil divisions of the year, the moveable and other feasts, and the times of the occurrence of various astronomical and meteorological phenomena, including in the former term not only those which are remarkable, such as eclipses of the sun and moon, but also those of a more ordinary character, such as the position of the sun, moon, and planets, the times of their rising and setting, the position of the fixed stars, the times of high and low water, and information relative to the weather. The political, statistical, social, and other information, with which modern almanacks are so well stored, and which ancient ones knew nothing about, may be considered the most useful and popular features of almanacks as now published.

Almanacks are almost as old as astronomy itself. In fact, in any country where the sciences were cultivated, there must have been some record of astronomical phenomena.

It is not now known what were the first almanacks published in Europe. The Alexandrians constructed them in or after the time of Ptolemy, a great Greek astronomer, as appears from the account of Theon. Almanacks of some sort were doubtless in common use at a very early period; but, in the dearth of books which have come down to us, the earliest of which we have any notice are those of Solomon Jarchus, published about 1150, and the celebrated Pusbach, 1461. The almanacks of Regiomomtanus, said by Bailey, in his "History of Astronomy," to have been the first ever published, but of which it might have been more correct to say, the first ever *printed*, appeared in 1471; "since which time," says the "Penny Cyclopædia," "we can trace a continuous chain of such productions. The almanacks of Regiomomtanus, which only contained the eclipses and the positions of the planets, were sold, it is said, for ten crowns of gold. There is an almanack preserved in the *Bibliothèque du Roi*, at Paris, which appeared in 1442. The almanacks of Engel, of Vienna, were published from 1494 to 1500; and those of Bernard de Granolache, of Barcelona, from about 1487. There are several manuscript almanacks in the library of the British Museum, and also in that of Corpus Christi College, Cambridge, which were published in the fourteenth century."

Foretelling events, or attempting to do so, was at one time the interesting feature of almanacks. But these silly and mischievous pretensions are but little tolerated in the enlightened age we live in.

James I. granted a monopoly of the trade in almanacks to the Universities and the Stationers' Company. Several almanacks are now published annually at the Stationers' Hall, London, and the

19th of November is what is called "Almanack Day."

The "prophetic" almanacks foretold the deaths of princes, wars, lightning, thunder, rain, political changes, and the fate of the harvests. Two of these are still in existence, and command extensive sales.

Of the professed astronomical ones, the most important in England is the "Nautical Almanack." It is published four years in advance, and to it the makers up of all others refer for their astronomical information. This almanack has been held in high repute from the year 1767, when it first appeared. It was projected by Dr. Maskeyne, the Astronomer Royal, under whose superintendence it remained for forty-eight years.

Up to a comparatively recent date, almanacks were subject to a tax of fifteenpence each copy. This tax rendered these useful annuals dear and scarce. The tax was no sooner removed than competition threw hundreds into the market, and at the present time the country is almost overstocked with them.

THE TWO ALMANACKS.

A FABLE.

UPON a desk it chanced one day,
Two almanacks together lay—
One of the present year, and one
With date of the old year, just gone—
When slightly raising up his head,
The latter to his neighbour said:
"Dear neighbour, for what crime have I
Deserved my altered destiny?
My master used to honour me:
Each moment of the day would he
Turn over and consult my page:
But now, alas! in my old age,
Dishonoured, to the dust I'm thrown,
While he hath eyes for thee alone."
The other, then, in page and rim
Quite fresh and new, thus answered him:
"Thou art not of this age, my friend,
And of thine own there is an end.
Sunday with us, as thou mayest see,
Is only Saturday with thee.
Thou art, poor friend, a day too late—
Thou must blame nothing but thy date;
And if, thanks to my own, I'm now
What thou wert once, yet I must bow
To the same lot—to have lived my time
Of twelve months more, my only crime."
Thus all things change and pass away
In this frail world. To outlive our day
Is to be dead: nothing is wrong,
And men are charmed, just so long
As we can serve them. Let us lose
Our usefulness, and we abuse
And call them ingrates. Be content,
Men of bygone age, of power spent;
Old servants, veterans, human flowers
Of withered beauty; lovers, ye
Who mourn your mistress' perfidy—
ALL ARE OLD ALMANACKS.

Alphabets.—The English alphabet contains twenty-four letters, or if we add the consonants j and v, there will be twenty-six; the French contains twenty-five; the Hebrew, Chaldee, Syrian and Samaritan, twenty-two each; the Arabic, twenty-eight; the Persian, thirty-one; the Turkish, thirty-three; the Georgian, thirty-six; the Coptic, thirty-two; the Muscovite, forty-three; the Greek, twenty-four; the Latin, twenty-four; the Sclavonic, twenty-seven; the Dutch, twenty-six; the Spanish, twenty-seven, the Italian, twenty; the Ethiopic and Tartarian, each two hundred and two, the Indians of Bengal, twenty-one; the Burmese, nineteen. The Chinese have, properly speaking, no alphabet, except we call their whole language by that name; their letters are words, or rather hieroglyphics, amounting to about 80,000.

Alteratives.—These are medicines which produce a beneficial change in the patient's health without causing any strong evacuation, either by perspiration or other discharge. They do not produce any immediate effect, but gradually improve the health by repeated doses. Almost every kind of medicine can be so administered as to be an alterative. Thus, 10 grains of ipecacuanha will produce vomiting, but half a grain taken before a meal daily, for several days successively, will increase the patient's appetite and stimulate his digestion. So, many preparations of mercury, in full doses, are poisonous, but in minute doses they relieve from diseases which make life a burden. Arsenic, so deadly a poison, will often, when properly administered,

remove ague and the most distressing headache. Sarsaparilla, quinine, and even change of scene, and total change of diet, are alteratives.

A man is not ill, yet he is not well; he has deranged his functions by excess of some kind; it matters not whether the excess be in study or food, the symptoms are the same. His sleep is disturbed; he wakes with a fevered tongue, and his skin is dry and harsh. Small doses of ipecacuanha will permanently relieve him from these symptoms, as a little salt taken in the mouth will remove it at the time; but of course the return of the consequences of excess can only be avoided by not over-indulging.

Alum.—See *Baskets*.

A.M.—An abbreviation of *ante meridian*, before noon. These initials stand also for *Anno Mundi*, in the year of the world, as well as for *Artium Magister*, master of arts, the second degree given by universities and colleges.

Amber.—This substance is hard and resinous, possessing a sub-acid taste, and a fragrant, aromatic smell. It is obtained from many countries, but chiefly from the shores of the Baltic Sea. It has also been found in various parts of England. Prussia derives from this article a large annual revenue.

The most remarkable properties of amber are, that it attracts other bodies to its surface, such as paper, hair, wool, &c., and that it presents a luminous appearance in the dark. In its native form under ground, it resembles pears, almonds, peas, &c.; but, when broken, leaves, insects, and other small objects frequently appear enclosed. Hence it has been supposed that amber was originally in a fluid state, or that from its exposure to the sun it became softened so as to allow of the admission of foreign substances. As these are never found in its centre, but always near its surface, the latter seems the more probable conjecture. Animals of all kinds are extremely fond of it. Several centuries before the Christian era it was in high esteem as a medicine, and Plato and other writers have commended its virtues. Among the Romans it was regarded as a gem, and in the reign of Nero was bought in immense quantities in the capital, where it was highly prized by the fashionable ladies, who decorated themselves with trinkets made of that substance.

As a medicine, amber is in but little repute, though it is still given in hysteric affections, and in those diseases which proceed from debility. Formerly it was used in a variety of preparations, but of late an essential oil is the only form in which it is employed. Lastly, it constitutes the basis of several kinds of varnish, and is much used for mouth-pieces of smoking-pipes.

Broken amber is joined by smearing the surfaces of the fracture with linseed oil, pressing them very tightly together, and heating the amber at the same time over a charcoal fire or red-hot plate, enough to cause the surfaces to soften and unite without injuring the outward appearance.

Ambergris.—This is an odoriferous substance, which is found floating on the sea near the Molucca Islands and other parts of the Indian Ocean, and off the coast of South America. It is believed to be rejected by the spermaceti whale, on which it has sometimes been found. It has a strong, agreeable odour, resembling that of musk, and a fatty taste. Ambergris is rarely employed alone. The essence of ambergris of the perfumer is an alcoholic tincture of the substance, to which the oils of roses, cloves, &c., are added, according to fancy. "A handkerchief," says Professor Johnston, "scented with ambergris, retains the odour even after it has been washed; musk and civet are scarcely less permanent."

Amulets.—This term comes from the Latin *amollier*, *amollitus*, to remove, and signifies something worn as a preservative against any evil feared or suspected. Disease and witchcraft have in all times been the great evils against which the ignorant and superstitious have sought to protect themselves, by the wearing of amulets, the belief in which, engraved on gems, or enclosed in golden boxes, containing scraps from the Koran, worn round the neck, wrist, or arm, is still universal in the East. The Korsee (throne) verse, in the second chapter of

the Koran, describes the attributes of the Most High, and is engraved in this manner and worn by the pious, as the most esteemed and sublime of all sentences. The writing is covered with wax cloth, to preserve it from accidental pollution or injury by moisture. The amulet is called "*hegad*." Lord Byron, in the "Bride of Abydos," thus alludes to the belief in amulets in the East:—

> Yes, there is light in that lone chamber,
> And o'er her silken ottoman
> Are thrown the fragrant beads of amber,
> O'er which her fairy fingers ran:
> Near these, with emerald rays beset,
> (How could she thus that gem forget?)
> Her mother's sainted *amulet*.

Anagrams.—Of the various devices for family or social amusement none are more ingenious than anagrams. The term itself is derived from two Greek words, *ana*, again, back, and *gramma*, a letter; and the meaning is, the turning of a word or sentence so as to form others. Transposition is another word applied to the same pastime, and is equally expressive. On a small scale this is frequently done. If you have a box of letters, you may take from it an L and a V, and an E and an I, and desire to have more words than there are letters. If placed rightly ONE WORD will be formed.

But anagrams are far more interesting if the changes of the words bear some relation to each other, and yet more when they can be made to apply to historical events or characters. As an example of the first class we may give the question—"Is pity love?" which, being transposed, answers, "Positively." Again, "Best in prayer," is chosen. "What is that?" may the puzzled company ask. If a Scot is of the party, the reply will soon be ready in "Presbyterian." "Mind his map," gives a smiling miss to brother or cousin lately escaped from school; he, having entered the Royal navy, has no difficulty in solving the injunction with the word "midshipman." One, more bold than the rest, may break into a knot of elders, who are seriously discoursing of the comet, with the words "moon starers;" this is too old and too common to remain an instant in doubt, and "astronomers" is instantly discovered. The anagram may also be used poetically, as follows:—

> Reverse a snug apartment, and you'll find
> A dreary place presented to your mind.

The answer to this is "room," which reversed is "moor."

Anchovies.—See *Adulterations*.

Angling, CALENDAR FOR.—*January.*—Jack (or pike), chub and roach are the only fish that will take a bait this month; you may angle a few hours in the middle of the day for them, provided the water be clear.

February.—Carp, perch, roach, chub, jack (or pike), will feed, if the weather be mild; at this season, fish in the middle of the day, in eddies near banks.

March.—Jack (or pike), carp, perch, roach, chub, gudgeon, dace, and minnow will take a bait during this month about the middle of the day, in the shallows and eddies.

April.—All fish mentioned under March, as well as trout, and sometimes tench, in rivers; barbel, bleak, flounders, and eels, in shallows, sharps, &c., may be taken this month.

May.—Eels will take a bait, night and day, during this month; all freshwater fish now feed; in ponds you may have sport, but still angle, for choice, in shallows and eddies.

June.—This is a bad month for the angler; most fish (except trout), having recently spawned, and being out of condition.

July.—All freshwater fish will now take a variety of baits, but not very freely. Do not quit the streams and scours.

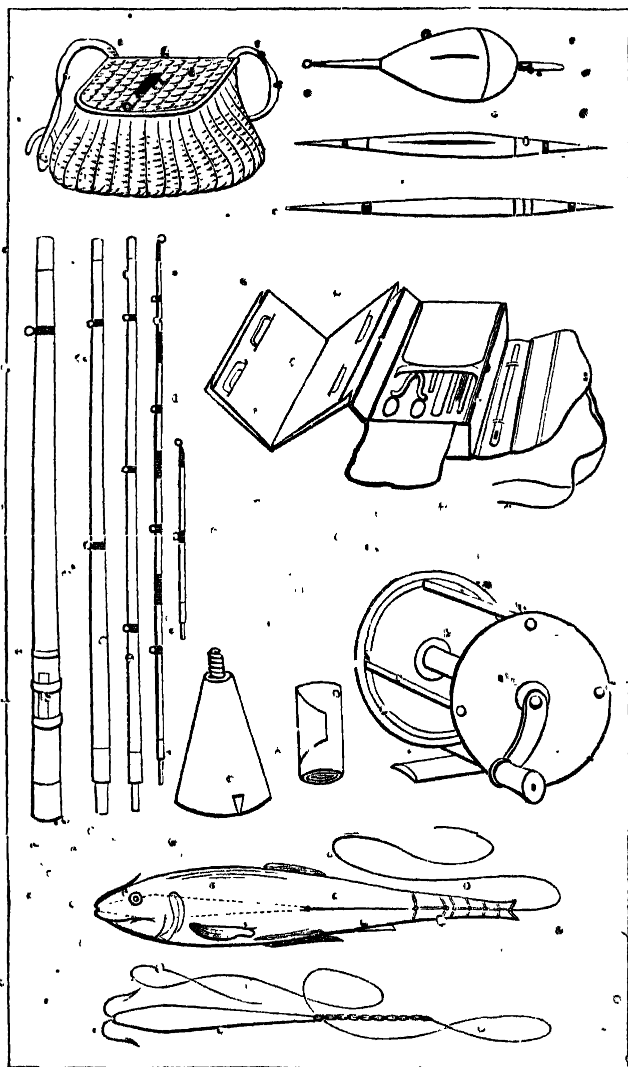
August.—Fish will bite more freely, especially in the morning and evening, during this month.

September.—Barbel, roach, chub, and dace now go into deep water, and there remain till Spring.

October.—For trolling and bottom-fishing for roach and chub, this month is good; but not for fly-fishing, or angling in ponds or still waters.

November.—Roach, chub, Jack (or pike) will still feed, sometimes freely, in the middle of the day.

December.—Roach, chub, Jack (or



PANNIER, FLOATS, ROD, TACKLE CASE, PLUMMETS, WINCH, THE GORGE-HOOK, AND HOW TO BAIT IT WITH A MINNNOW.

pike) will continue to afford the angler amusement, if favourable opportunity occur. The waters are, however, generally thick, or frozen up.

Angling.—Tackle and Flies for.—*The Rod.*—In the choice of his rod the angler will generally be directed by local circumstances. The cane rods are lightest; and where fishing-tackle is sold, they most commonly have the preference; but in retired country places, the rod is often of the angler's own manufacture, and he should, at any rate, be capable of supplying himself with one upon an emergency. No wood, as a whole, is better adapted for this purpose than the common hazel; and if to this he can add a sound ash stock, or butt-end, and a whalebone top, he is as well furnished with materials as he need desire to be. Salmon rods are sometimes wholly made of ash, with a whalebone top. Other rods may be formed thus: a yellow deal joint of seven feet; a straight hazel joint of six feet; a piece of fine-grained yew, tapered to a whalebone top, and measuring together about two feet. Always carry a jointed rod, when not in use, tightly looped up.

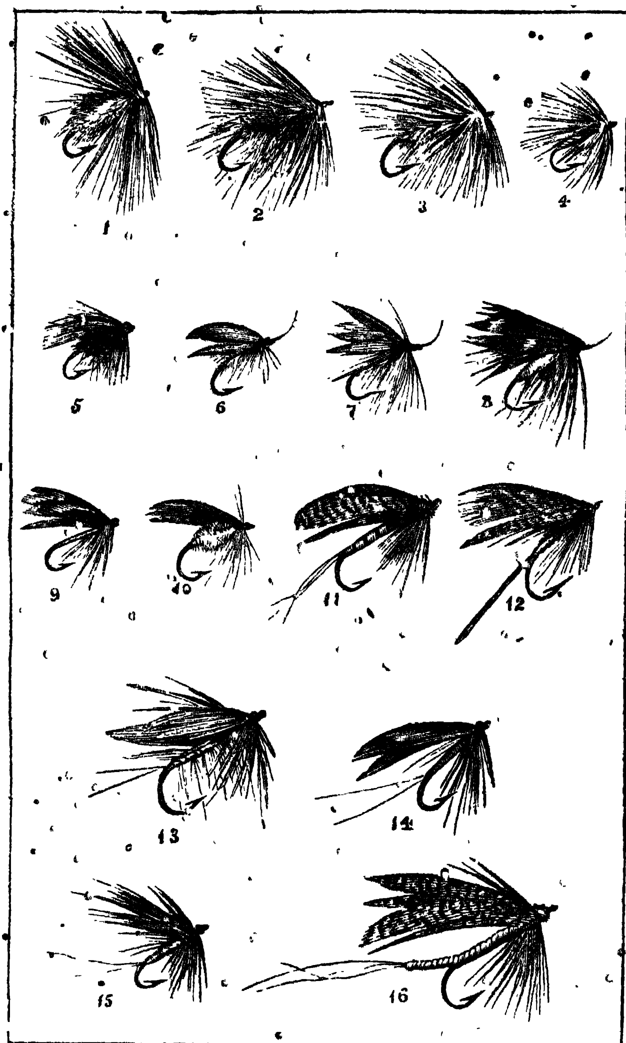
The Line.—Like the rod, the line should gradually diminish towards the further extremity; and no materials are better than strong, clear horse-hair. If you make it yourself, the hairs from the middle of the tail are best, and those of a young and healthy grey or white stallion; sort them well, that the hairs, at every link may be of equal size with each other; and if you wash them, do not dry them too rapidly. For ground fishing, brown or dark hairs are best, as resembling the colour of the bottom. Silk lines are more showy than useful. They soon rot, and catch weeds.

The Hook.—Your hook should readily bend without breaking, and yet retain a sharp point, which may be occasionally renewed by a whetstone. It should be long in the shank and deep in the bed; the point straight, and true to the level of the shank, and the barb long. From the difficulty of tempering and making them, few anglers ever undertake the task. Be careful to provide yourself with a variety accordingly. Their sizes and sorts must, of course, entirely depend on the kind of fish for which you mean to angle.

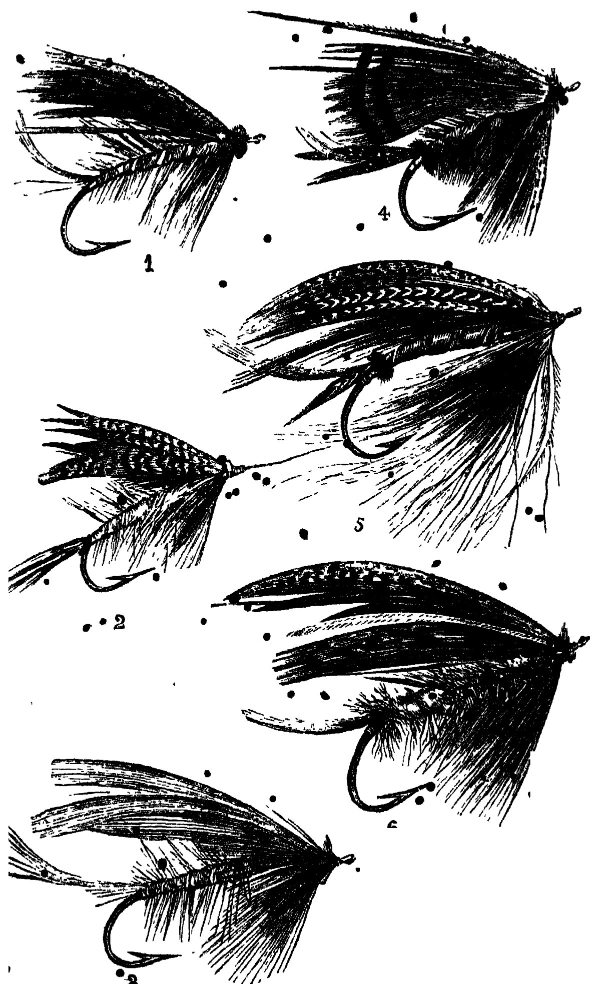
Floats.—These are formed of cork, porcupine quills, goose and swan quills, &c. For heavy fish, or strong streams, use a cork float; in slow water, and for lighter fish, quill floats. To make the former, take a sound common cork, and bore it with a small red-hot iron through the centre, lengthways; then taper it down across the grain, about two-thirds of the length, and round the top, forming it, as a whole, into the shape of a pear. Load your floats so as just to sink them short of the top.

Artificial Flies.—These are so numerous, and their importance so great, that much of the angler's time is generally occupied in mastering a knowledge of their various forms, and the mode of tying them. All of them are composed of three essential parts; first, the hook; second, the gut or loop to attach the hook to the line; and third, the various articles tied on the hook for the purpose of imitating the natural fly.

The materials are first to be collected, and if they are not at once bought in the mass from the fishing-tackle maker, they require some little time to get them together. They consist of hooks of all sizes; gut, plain and dyed, fine and stout; fine, curved, and common scissors; nippers and pliers; silks of all kinds and colours; wax, spirit-varnish and brush; wing-picker or pointer; pair of fine spring forceps; dubbings, viz.; pig's wool, mohair, coloured wools, hare's ear fur, white seal's or white rabbit's fur, water-rat's fur, cowhair, squirrel's fur, mole's fur, black spaniel's ear fur, black bear's hair, &c. Tinsels, viz., gold and silver, flat wire, twisted and fretted cords, &c. Feathers for trout flies, viz., wing feathers of snipe, woodcock, partridge, landrail, thrush, lark, starling, blackbird, wren, waterhen, coot and redwing. Body feathers of grouse, pheasant, mallard, teal and golden plover. Hackles of barn-door fowl in all colours. Neck-feathers of partridge, starling, lapwing, wren, to be used as hackles. Peacock herls and ostrich herls of all colours, dyed. Feathers for salmon flies



TROUT FLIES.



SALMON FLIES.

including those of turkey, in all shades, golden pheasant neck and body-feathers, silver pheasant, common pheasant, argus pheasant, peacock, and jungle-cock. Blue feathers of the lowrie and macaw, and of the jay's wing. Green feathers of the macaw. Besides the natural colours, there should be dyed cock's hackles of larger size than for trout, of the following shades, viz., purple, blue, crimson, scarlet, orange, yellow, green and brown. Feathers of the kingfisher, swan's feathers for dyeing. Guinea-fowl, bittern, heron (pendant and breast feathers), ostrich and raven. Few collections comprehend the whole of the above, but the angler may endeavour to obtain as many of them as possible; still he may rest satisfied even if he is not able to fill up every link in so extensive an assortment.

Dyeing is required when the natural feathers, &c., are not sufficiently varied. It is an art exceedingly simple in principle, though not always so easy in practice, if the colours are required to be very delicate or brilliant.

General Principles of Fly-making.—In all cases the gut and hook should first be selected of such size and strength as will serve to hold the fish which they are intended to capture; then whip the hook on one end of this piece of gut, after flattening it with the teeth, using for the whipping a piece of strong silk, well waxed with cobbler's-wax. Sometimes the continuation of this same silk is used for the purpose of tying on the feathers, wool, &c., but usually a finer kind is employed, and especially where great neatness is required, as in the smaller-sized flies. The most simple fly is made up of a head, body, and legs; the next stage of complication gives a pair of simple wings, then a tail, and finally are super-added, in the salmon-fly, the compound bodies with separate joints and legs, and the wings and tails, composed of various coloured feathers.

The body is made of one or other of the following materials: first, coloured floss-silk wound round the shank regularly, and giving a uniform smooth and shining surface; secondly, of wool, fur, or mohair, called dubbings, attached to the tying-silk by the adhesive power of the wax with which it is covered, and forming with it a rough hairy line, which is then wound round the shank from the end to the bend, or *vice versâ*—this forms a rough, hairy-looking body, as in the hare-lug, and numerous other flies; thirdly, of peacock or ostrich herl, either of which is wound singly or in double layers round the shank, and forms the body of several of the most killing flies—as, for instance, the black gnat and peacock-hackle; fourthly, of a foundation composed of either of the above materials ribbed with silk, or gold, or silver-twist wound spirally round, or sometimes in a circular manner at intervals on the body, or as a terminal joint at the lowest part.

The legs or feelers are generally made of feathers wound spirally round the shank of the hook, but sometimes dependance is placed on the dubbing, which, after it is wound round, is pulled out by means of the picker, and made to take the form of the legs, as in the hare-lug and brown-rail. This, however, answers badly, except in very small flies, as all the dubbings lie close in the water, and do not serve to conceal the bend and barb of the hook like the hackles or any other kind of feather. Generally speaking, the legs are imitated by some of the many coloured cock's hackles, which the fly-fisher ought to possess, either of the natural colours of the cock, or dyed to imitate them as closely as possible. These are first tied at the point to the shank, beginning always from the side next the bend and ending at the shoulder, and thus keeping the longest fibres of the hackle outwards. Sometimes the whole body is invested with two or more hackles, after first making it up full with dubbing of some kind. This is seen in the single and double palmers.

The head is generally made by a few turns of silk, or by the black herl of the ostrich, or that of the peacock's feather.

The tail, when used, is composed in the trout-fly of two or three fibres of some feather, as in the grey drake; or of two fine hairs, as in the stone fly. In the salmon-fly it is often much more complicated, and is then generally composed of a part of the crest-feather of the golden pheasant, with or without the addition of

a tag of coloured silk or other gaudy material.

The wings in the trout-fly are generally composed of two pieces of the web of some of the feathers enumerated in the list already given. They are sometimes tied on at the shoulder, in the direction which they finally assume, but the best plan, and that which gives the best appearance in the water, is to tie them on first the reverse way to that which they must take when finished, and then turn them back again, and retain them in that position with a couple of turns of the silk. In the salmon-fly the wings are often made up of six different feathers, each called a topping.

A little varnish added with a fine brush to the head, and also at the lower end next the tail, but with great care, prevents those parts from coming to pieces, and greatly adds to the lasting properties of the fly.

The following are the names of the flies shown in our illustrations:—1, the peacock hackle, which is one of the simplest of all flies; 2, 3, 4, palmer and hackles; 5, the black gnat; 6, the hare-lug; 7, the yellow sally; 8, the oak-fly; 9, the capeier; 10, the winged palmer; 11, the green drake, or May-fly; 12, the grey drake; 13, the stone-fly; 14, the March-brown; 15, the red spinner; 16, the winged larva.

SALMON-FLIES are made on the same principle as the trout-flies, but as they are larger, so they are capable of being tied with greater exactness and finish. They are generally of much more gaudy materials than the trout-flies; and in this respect they have latterly been used still more richly coloured than was formerly the case. In nearly all cases this fly consists of a body, a head, legs, and tail, and wings of a very compound nature; but the mode of tying is very similar to that adopted in trout-fly making. Most salmon-flies are tied with a small loop of gut attached to the shank, instead of, as in the trout-fly, a full length of that material; sometimes a bristle or a piece of wire is bent for the purpose, and again in some cases the gut, either plain or twisted, is tied on as in the trout-fly. Whichever mode is adopted, the end or ends of the gut or bristle must be shaved off, and moulded with the teeth into slight ridges, so as neither to present an abrupt and unsightly edge where they leave off, nor to be so smooth as to be liable to slip from the hook. This eye or length of gut is to be first whipped on to the hook in the usual way with strong waxed silk, which is then to be fastened off and removed; and for the subsequent tying, a finer and generally a bright-coloured silk adapted to the particular fly is to be employed.

The salmon-flies shown in our illustration are named as follows:—

1, The salmon-fly; 2, small salmon or grilse-fly; 3 and 4, gaudy-salmon; 5. medium salmon-fly; 6, extra gaudy salmon-fly.

SEA-TROUT FLIES may be made of sizes and colours intermediate between the trout and salmon-flies. They are tied of all colours, and with or without the addition of a gaudy tail of golden pheasant fibres, and tinsel wound round the body.

Angular Measure.—

60 Seconds (60″)	=	1 Minute (1′).
60 Minutes	=	1 Degree (1°).
90 Degrees	=	1 Right Angle.
360 „	=	1 Circle.

Animal Heat.—Man and many other animals possess the property of remaining at nearly the same temperature at all times. Water will freeze at a temperature of 32 and boil at 212 degrees; yet man's body, while living, would alter very little from 98 degrees, its natural heat, in a situation where water freezes or boils. Sir C. Blagden stayed in a room heated to 264 degrees, while his body was not heated to more than 102 degrees, though he breathed air that roasted beef and eggs. The most that is yet known about this wonderful power of repelling or retaining heat is, that some way or other, it is caused by the action of the air on the blood in the lungs—the generation of carbonic acid in the blood, during its circulation, especially through the capillary vessels—and the modifying influences of the nervous system. The practical effect of this benevolent law of man's nature is to enable him to live.

with comparative comfort, in all climates, seasons, and temperatures, if he adapt his clothing, food, &c., to his situation; which first privilege he enjoys alone, as other animals cannot change their clothing when they like, as he can, and seldom their food and shelter. Cold does more injury to the body than heat, as it obstructs the circulation of the blood. Great care should therefore be taken to protect the body from severe external cold, by good warm clothing; that next the skin of invalids ought to be fleecy, and of loose texture, to retain the animal heat. In very hot weather, light-coloured and easy-fitting clothes are the best for keeping the body cool.

Animals, Estimate of the Number of, and their Classification.—

	Species.	
Quadrumana	170	
Marsupiala	123	
Edentata	28	
Pachydermata	39	
Carnivora	514	
Rodentia	604	
Ruminantia	180	
		1,658
Birds		6,266
Reptiles	657	
Turtles	8	
Sea Snakes	7	
		672
Insects		550,000

Annulette, Game of.—In the following manner this amusing parlour game is played:—Nine pins, similar to skittles, are placed in an inclined frame, with numbers attached. The object of the player being to cast nine rings on to the pins, scoring the numbers thus gained. This game requires great skill, and is much admired. It is well adapted for evening parties. The pins and feet can be removed, making it very portable. The price, complete, is 12s.

Aperients, Spring, for Children, Safe.—Nothing is better for children than: 1. Brimstone and treacle; to each cupful of this, when mixed, add a teaspoonful of cream of tartar. As this sometimes produces sickness, the following may be substituted: 2. Take of tartrate of soda one drachm and a half, powdered jalap and powdered rhubarb each fifteen grains, ginger two grains: mix. Dose for a child above five years, one *small* teaspoonful; above ten years, a *large* teaspoonful; above fifteen, half the whole or two teaspoonfuls; and for a person above twenty, three teaspoonfuls, or the whole, as may be required by the habit of the person. This powder may be dissolved in warm water, common or mint tea. It may also be kept for use in a wide-mouthed bottle, and be in readiness for any emergency. The druggist may be requested to double or treble the quantities, as circumstances may require.

Apostles & Evangelists, Fate of the.—St. Matthew is supposed to have suffered martyrdom or been slain with a sword, in a city of Ethiopia. St. Mark was dragged through the streets of Alexandria, in Egypt, until he expired. St. Luke was hanged upon an olive tree in Greece. St. John was put in a cauldron of boiling oil, at Rome, and escaped death; he afterwards died a natural death at Ephesus, in Asia. St. Paul was persecuted to death at Rome. St. Peter was crucified, with his head downward, at Rome. Tradition says that these two apostles suffered martyrdom together. St. James the Great was beheaded at Jerusalem. St. James the Less was thrown from a pinnacle or wing of the Temple, and then beaten to death with a miller's club. St. Philip was hanged up against a pillar at Hieropolis, a city of Phrygia. St. Bartholomew was flayed alive, by the command of a barbarous king. St. Andrew was bound to a cross, whence he preached to the people until he expired. St. Thomas was run through the body with a lance at Coromandel, in the East Indies. St. Jude was shot to death with arrows. St. Simon Zelotes was crucified, and St. Matthias was first starved and then beheaded.

Apothecaries' Weight.—

20 Grains	make	1 Scruple.
3 Scruples	"	1 Drachm.
8 Drachms	"	1 Ounce.
12 Ounces	"	1 Pound.

This weight is used by Apothecaries in mixing medicines, but drugs are bought and sold by Avoirdupois weight.

Appearances.—In the present day far too much attention and consideration are bestowed on appearances, whilst the sterling worth or value of a thing is treated, comparatively speaking, as though it were of small import. We ought not to be satisfied with outward show or appearance, but thoroughly to investigate all that is of real importance for us to be acquainted with.

If this precaution be neglected, we may, through deceptive appearances, receive false impressions of persons and of things; and by communicating them to others produce on their minds also impressions anything but correct, thereby perchance entailing much disappointment and unpleasantness. On the other hand, if possessed of a tolerable degree of clear-sightedness, and penetration of judgment, we may be able to discover, for instance, the true character of a person feigning to be our *friend*, but under the guise of friendship hiding deceit and hypocrisy, and acting in direct opposition to the dictates of reason as to what a true friend should be.

There are numerous illustrations to be drawn from nature of the folly of trusting to appearances. In gazing at the ocean on a fine summer's day, we might be tempted to think that so beautiful and glossy a surface could never be agitated or angry. Let us view it again in the dead of night. Now it is rushing, foaming, roaring, its smooth surface lashed into a thousand furious waves, dashing up mountains high. In this instance appearances are deceitful—not to be trusted. So with the magnificent mausoleum, which the hand of wealth has reared to the memory of some great one of the earth. The exterior decorated, sculptured, and emblazoned; the interior full of corruption.

Then, since this habit may be productive of such fatal results, it becomes us to seek something *real* on which to repose our confidence and hopes of happiness. Since all in this world is so unreal and empty, our thoughts should aim higher —even to the anticipation of the life above, where pleasures will be true and lasting, where *all* our friendships will be pure and constant, and where the source of our happiness will be the presence of our unchanging God. The surest and sweetest way to live with honour in the world is to be in reality what we appear to be.

Appraisements.—

Amount not above £50 .	0	2	6
Above £50 and not above £100	0	5	0
" 100 " 200	0	10	0
" 200 " 500	0	15	0
" 500 "	1	0	0

Apprentices, DUTIES OF, TO THEIR MASTERS.—1. *Be strictly honest.* —You are allowed free access to a great amount of your master's property, because he believes you to be honest. Make it, therefore, a matter of conscience, whatever be your circumstances, never to steal or pilfer the least article of property belonging to your employer.

2. *Beware of wasting or damaging any part of your master's stock.*—Be quite as careful of anything you use as if it were your own. Never spoil or waste anything by carelessness, or countenance others in doing so.

3. *Be diligent at your business.*—You will do the best work when you are the most active; and it is for your own advantage to form habits of industry. Never saunter over any job you have in hand.

4. *Be exact in observing the hours of business.*—It is as wrong to rob your master of the *time* which you ought to devote to his service as it is to rob him of his property.

5. *Avoid eye service.*—Do not act the hypocrite, but work as hard and behave as well in your master's absence as you would if he were present.

6. *Be faithful to your employer's interest.*—Never injure his reputation or credit by circulating evil reports, but always consider your own interest as identified with his.

7. *Be determined to excel in your business.*—If you neglect this now, you will feel the loss of it as long as you live. Be studious to make yourself fully acquainted with the principles of your trade, and spare no pains to become perfect.

8. *Cultivate every moral excellence.*—Without these, your mechanical attainments will avail you little. Avoid bad

companions, shun the tavern, be dutiful to your parents, and kind and good to all.

Apprentices' Indentures.

When the Premium is under £30		1	0	0
£30, and under £50	. . .	2	0	0
50, " 100	. . .	3	0	0
100, " 200	. .	6	0	0
200, " 300	. .	12	0	0
300, " 400	. .	20	0	0
400, " 500	. .	25	0	0
500, " 600	. .	30	0	0
600, " 800	. .	40	0	0
800, " 1,000	. .	50	0	0
1,000, or upwards	. . .	60	0	0
If no Premium	. . .	0	2	6

Archbishops & Bishops.—Archbishops have the ducal title of "grace," and take precedence of all dukes, next to those of royal birth. The Archbishop of Canterbury ranks as first peer of the realm, and the Archbishop of York as third, coming immediately after the Lord Chancellor. His grace of Canterbury styles himself "by Divine providence," while the Archbishop of York, and the bishops, adopt the term "permission," instead of "providence."

Bishops are styled "Lords" and "Right Reverend Fathers in God."

The wives of ecclesiastics are not designated by the titles of their husbands.

"Reverend" belongs to all clergymen under the rank of archdeacon. An archdeacon is addressed as "The Venerable the Archdeacon B——." A dean, as "The *Very* Reverend, the Dean of ——." A bishop, as "The *Right* Reverend the Bishop of ——." An archbishop, as "The *Most* Reverend the Archbishop of ——." But the archbishop being equal in rank to a duke, his letters are addressed as follows:—"To His Grace the Archbishop of ——."

Archery.—Pity that so fine and graceful a sport for ladies should be so neglected by them. It is exhilarating and health-giving, and is always pursued with advantage to deportment. Much importance is properly attached to the attitude assumed by a lady archer. To this end, care should be taken to observe the following instructions: To keep the heels a few inches apart, the neck slightly curved, and the face and side turned towards the target. The left arm must be held out straight to the wrist, which should be bent inwards, the bow held easy in the hand, and the arrow when drawn should be brought towards the ear, but not to the eye. The right hand should begin to draw the string as the left raises the bow. When the arrow is three parts drawn, the aim is to be taken; in doing this, the pile of the feather should appear to the right of the mark; the arrow is then drawn to its head, and immediately loosened.

A person at the targets should be furnished with a card for the insertion of the archers' names, and to register the hits made by each. The face of a target generally contains four circles, with a gold centre. The inner circle is usually red; the next white; the third, black; and the outer, white, bordered with green. The mode of counting the hits is by the following increased scale: One in the gold counts nine; one red counts three; inner white one counts as two; in black, four counts as five; the outer white, one counts as one. The numbers can be computed in this manner, or, as is sometimes preferred, by the hit nearest the centre of the gold.

The bow best adapted for the use of ladies is made of lancewood, and should not exceed five feet in length. The resisting power ought not to be more than twenty-four to thirty-four pounds, and particular regard should be had in the purchase, that it should not be above the strength of the party for whom it is intended.

Arrows, in their weight, must be duly proportioned to the power of the bow, and preference should be given to those which taper from the point to the feathers.

The brace, which is made of stout leather, is buckled round the bow arm just above the wrist, to prevent the string from hurting it.

The shooting-glove, to protect the fingers, the towel to wipe the arrow when covered with dirt from striking the ground, and a belt to contain the pouch or quiver, are the other corollary accessories in following the agreeable pastime of archery.

Arithmetic, SIGNS USED IN.—
= Equal to, signifies Equality; as 12 pence = 1 Shilling.
+ Plus or more, signifies Addition; as 5 + 3 = 8.
— Minus or less, signifies Subtraction; as 7 — 3 = 4.
× Multiplied by, signifies Multiplication; as 3 × 5 = 15.
÷ Divided by, signifies Division; as 12 ÷ 4 = 3.

Arrowroot.—See *Adulterations.*

Arsenic.—See *Adulterations.*

Artificial Flies, FOR ANGLING.—See *Angling.*

Ascension Day.—This religious festival is on the fortieth day after Easter, and is designed to commemorate Christ's ascension into heaven. This day was once distinguished by great festivities. There prevailed a custom not many years ago of the parish schoolmaster, going with his pupils, carrying peeled willow-wands, round the parish, and with the wands striking the boundaries.

Ash Wednesday.—This is the first day in Lent, a holiday in the Church of England. The palms or substitute branches, consecrated and used on Palm Sunday of one year, were kept till the present season of another, when they were burnt and their ashes blessed by the priest, and sprinkled on the heads of the people; hence the name given to the day. This sprinkling of ashes was performed with many ceremonies and great devotion. In England it is still a reason for the saying of the "Commination" in the Prayer Book, by which the doers of certain kinds of wickedness are cursed.

Aspic.—Take a knuckle of veal, a knuckle of ham, a thick slice of beef, and—if these will not make the jelly stiff enough—add two calves' feet, or some swards of bacon, rasped; put into a saucepan with a pint of rich stock, and sweat them over a stove till reduced to a glaze, then moisten them with stock, boil and skim carefully. Add two onions, and carrots, salt, parsley, real limes, four cloves, two bay-leaves, and one clove of garlic; let the whole stew for seven hours, then strain off the liquor. Break four eggs into a stewpan, and add to them the liquor, when cold, the juice of two lemons, and two tablespoonfuls of tarragon, and beat it with a whisk over the fire until near boiling, and when it does remove your stewpan to a smaller fire, and place fire on the lid, for half-an-hour, then pass it through a wet double napkin. If the jelly is not sufficiently clear, clarify it a second time.

Put a layer of this jelly, about half-an-inch thick, at the bottom of an aspic mould; garnish it with truffles, white of eggs, sprigs of parsley, &c., according to your taste; pour in another half inch of the jelly, while liquid, with great care, so as not to discompose your garnish, then put either calves' brains, breasts of fowls, veal, sweetbreads, coxcombs, kidneys, or game. Be sure to lay whatever you use as equal and smooth as possible; then fill up your mould with jelly, and let it stand till set. When wanted, dip the mould in hot water an instant, place your dish on the top, and turn it over.

Atmosphere, PURITY OF, TO TEST.—A simple method of ascertaining the presence of impurity (carbonic acid), in the atmosphere, is to nearly fill a glass tumbler with lime-water, and to place it in a convenient position—as on the mantelpiece of a room. The rapidity with which a pellicle forms on its surface, or the water becomes cloudy, corresponds to the amount of the carbonic acid present in the atmosphere that surrounds it. Or a little moist carbonate of lead put on a plate or saucer and exposed in the same way, will turn black, should any sulphuretted hydrogen be contained in the air. This is a very delicate test for that destructive gas.

Atmosphere, WONDERS OF THE.—The atmosphere forms a spherical shell surrounding the earth to a depth at present unknown to us, by reason of its growing tenuity, as it is released from the pressure of its own superincumbent mass. Its upper surface cannot be nearer to us than fifty, and can scarcely be more remote than five hundred miles. It surrounds us on all sides, yet we see it not; it presses on us with a load of fifteen pounds on every square inch of surface of our bodies, or

from seventy to one hundred tons on each of us, yet we do not so much as feel its weight. Softer than the finest down—more impalpable than the finest gossamer—it leaves the cobweb undisturbed, nor even stirs the slightest flower that feeds on the dew it supplies; yet it bears the fleets of nations on its wings around the world, and crushes the most refractory substances with its weight. When in motion its force is sufficient to level the most stately forests and stable buildings with the earth, to raise the waters of the ocean into ridges like mountains, and dash the strongest ships to pieces like toys. It warms and cools, by turns, the earth and the living creatures that inhabit it. It draws up vapours from the sea and land, retains them dissolved in itself or suspended in cisterns of clouds, and throws them down again as rain or dew, when they are required. It bends the rays of the sun from their path to give us the twilight of evening and of dawn; it disperses and refracts their various tints to beautify the approach and retreat of the orb of day.

But for the atmosphere, sunshine would burst on us, and fail us, at once, and at once remove us from midnight darkness to the blaze of noon. We should have no twilight to soften and beautify the landscape; no clouds to shade us from the scorching heat; but the bald earth, as it revolves on its axis, would turn its tanned and weathered front to the full and unmitigated rays of the lord of day. It affords the gas which vivifies and warms our frames, and receives into itself that which has been polluted by use, and is thrown off as noxious. It feeds the flame of life exactly as it does that of the fire—it is in both cases consumed, and affords the food of consumption—in both cases it becomes combined with charcoal, which requires it for combustion, and is removed by it when this is over.

"The atmosphere," says Mann, "which forms the outer surface of the habitable world, is a vast reservoir into which the supply of food for living creatures is thrown—or, in one word, it is itself the food, in its simple form, of all living creatures. The animal grinds down the fibre and the tissue of the plant, or the nutritious store that has been laid up within its cells, and converts these into the substance of which its own organs are composed. The plant acquires the organs and the nutritious store thus yielded up as food to the animal, from the invulnerable air surrounding it. But animals are furnished with the means of locomotion and of seizure—they can approach their food and lay hold of it and swallow it; plants must wait till their food comes to them. No solid particles find access to their frames; the restless, ambient air, which rushes past them, loaded with the carbon, the hydrogen, the oxygen, the water—everything they need in shape of supplies—is constantly at hand to minister to their wants; not only to afford them food in due season, but in shape and portion in which alone it can avail them."

Augustan Age, The.—This included a period commencing about thirty years before the birth of Christ, and terminating about fifty years after that event. It has been called also the golden age of Latin literature, as during the reign of Augustus Cæsar such a number of illustrious writers flourished as caused it to be distinguished as one of the great ages of human literary excellence. The term "the Augustan age of English literature," is usually applied to the reign of Queen Anne, during which period a considerable number of eminent literary men lived and died.

"Aunt's Garden," Game of.—The company form a circle, and the one who understands the game best turns to his neighbour and speaks, as follows:—

"I come from my aunt's garden. In my aunt's garden are four corners."

Each of the players repeats in succession the same phrases, without adding or leaving out a syllable, under penalty of a forfeit and at the same time losing his turn to complete the sentence, when the one who is next to him takes it up without giving him time to correct himself.

When the turn comes again to the first speaker, he repeats what he has just said, and adds, "In the first corner there is a geranium."

The others then, in their turn, repeat, not only this phrase, but that which they have already repeated, paying a forfeit for the least mistake.

This round finished, the leader of the game repeats the whole, and adds, "In the second corner there is a rose. I would like to kiss you, but I dare not."

After the third round he adds, "In the third corner there is a lily of the valley. Tell me your secret."

Then each player, after having repeated the whole of these phrases in his turn, whispers a secret into the ear of his next neighbour.

At the end of the fourth repetition, the chief player adds, "In the fourth corner there is a poppy. That which you told me in a whisper, repeat aloud."

In proportion as the discourse, which has now arrived at its climax, passes round the circle, each player finds himself obliged to divulge the secret which he has confided to his companion, causing often considerable embarrassment to those who had not expected the game to take this turn, and to find themselves laid under this obligation.

Avoirdupois Weight.—

16 Drachms (*dr.*)	make 1 Ounce.	*oz.*
16 Ounces ...	" 1 Pound.	*lb.*
14 Pounds ...	" 1 Stone.	*st.*
28 Pounds ...	" 1 Quarter.	*qr.*
4 Quarters or 112lbs	" 1 Hundredweight.	*cwt.*
20 Hundredweight	" 1 Ton.	*ton.*

This weight is used in nearly all commercial transactions, and for weighing common goods.

Baby's Ball, To Make.—Take two round pieces of card-board about 2½ inches in diameter, cut a hole in the centre of each, about the size of a florin. Hold the two cards together as one, and wind Berlin wool double through the hole, and over the card circle in rounds, repeating until filled up. The rounds near the beginning must be rather loosely wound, then easily, and more tightly when nearly completed, otherwise much wool will be wasted in cutting the ball into shape afterwards.

Hold the covered cards in the middle while you cut through all the rounds of wool at the edge, when you will again see the two cards. Slip a piece of string between them, wind round a few times, and drawing it tightly, tie the ends securely. Now cut the cards, pull them out, and with the scissors trim the ball into a perfect round. About two dozen skeins of Berlin wool will be required. Beginning with crimson shades, dark to light; and ending with green, dark to light shades—or *vice versa*—will make a strong and handsome ball. The intermediate colours, which should also be in shades, harmonizing, may be according to fancy.

Backgammon.—This is the modern name of a game of considerable antiquity in England, where it was formerly known by the appellation of "The tables." The words "back-gammon" have been referred to the Welsh language, in which they are synonymous with "little battle;" but Strutt ascribes the term to the Saxon "bac and gamen," that is, back game—so denominated because the performance consists in the player bringing his men back from his antagonist's tables into his own; or because the pieces are sometimes taken up and obliged to go back—that is, to re-enter at the table they came from.

Whatever be the etymology of the term, the game has been long established in this country, and is a favourite game with clergymen, country squires, farmers, and retired professional persons.

Backgammon is played with an apparatus consisting of a board or table, men or pieces, dice and dice-boxes. The introduction of dice into the game, and their constant use in determining the moves, makes the game one of chance.

The backgammon board is made like the chess-board (indeed, the inside of a chess-board is very frequently arranged for backgammon). Every table possesses twelve points, six at each end. These points are coloured white and black alternately; but this variation of colour has no reference to the game, and is only done to make the points more easily counted.

The game is played by two parties, and with thirty pieces, or men—each party has fifteen men—fifteen black and fifteen white. In beginning the game,

the men are placed on certain points on the table. The game is played with two dice and two dice-boxes. The dice are common to both, but each player uses his own box, and the throws are alternate. Each dice is a complete cube, marked on its sides with dots, from one to six. The one is called ace; the two, deuce; the three, tre or train; the four, quatre; the five, cinque, and the six, size. At every throw the two dice are employed, consequently a person may throw from two up to twelve—that is, two aces up to two sizes.

If a player throw doublets, or both dice of one number, double the number of dots is reckoned; thus, by a throw of two aces, the player counts four.

These numbers thrown bear a reference to the points on the table. In order to understand this connection between the dice and the men, the learner must observe how the men are placed on the points, and the rules by which the shifting from one to another is governed.

The grand object of the game is for each player to get all his men played round into the table containing the aces, removing them from point to point agreeably to the throws of the dice.

In throwing, the number upon each dice turned up may be reckoned by itself, or collectively with the number on the other dice. Thus, if quatre be thrown by one dice and size by the other, a man can be advanced four points, and another six; or one man can be advanced ten points, providing that a point is open to suit the movement to it. No point can be moved to if covered by two men belonging to his adversary. If covered by only one man, which is called a "blot," then that man can be hit, and be removed from the point, and placed on the bar between the tables, his place being taken by the man who has won it.

The removal of a man to the bars throws a player considerably behind in the game, because the man must remain out of the play till the dice turn up a certain number corresponding to one open point on his adversary's table. Being fortunate to get an open point by this means, the man must be entered and brought round from hence, as in the case of others in the set to which he belongs. The frequent occurrence of this hitting of a blot gives your adversary a great advantage, and allows him to win the game.

Differing from other games, in this there are two kinds of victory—winning the "hit," and winning the "gammon." The party who has played all his men round into his own table, and by fortunate throws of the dice has borne, or played the men off the points first, wins the "hit." The gammon may be thus explained. When you have got all your men round to your own table, covering every point, and your adversary has a man out, then you are enabled to bear, or lift your men away. If you can bear all away, so as to clear your table before your adversary gets his man placed by a throw on your table, you win the gammon. If your adversary has been able to bear one before you have borne all your men, it reduces the victory to a hit.

Two hits are reckoned equal to one gammon, in playing matches. To win two games out of three is called winning the rubber, as at whist. The following are Hoyle's directions for "bearing" men:—

If a player have taken up two of his adversary's men, and happen to have two, three, or more points made in his own tables, he should spread his men, that he either may take a new point in his tables, or be ready to hit the man which his adversary may happen to enter. If he find, upon his adversary's entering, that the game is upon a par, or that the advantage is on his own side, he should take his adversary's man up whenever he can, it being twenty-five to eleven that he is not hit; except when he is playing for a single hit only—then if playing the throw otherwise give him a better chance for it, he ought to do it.

It being five to one against his being hit with double dice, he should never be deterred from taking up any one man of his adversary's.

If he have taken up one of his adversary's men, and should happen to have five points in his own tables, and be forced to leave a blot out of his tables, he should endeavour to leave it upon doublets pre-

ferable to any other chance, because in that case the odds are thirty-five to one that he is not hit; whereas it is only seventeen to one that he is hit upon any other chance.

When the adversary is very forward, a player should never move a man from his quatre, trois, or deuce points, thinking to bear that man from the point where he put it, as nothing but high doublets can give him any chance for the hit. Instead of playing an ace or a deuce from any of those points, he should play them from his own size or highest points; so that throwing two fives or two fours, his size and cinque points being eased, would be a considerable advantage to him; whereas, had they been loaded, he must have been obliged to play otherwise.

It is the interest of the adversary to take up the player as soon as he enters. The blot should be left upon the adversary's lowest point—that is to say, upon his deuce-point rather than upon his trois-point; or upon his trois-point rather than upon his quatre-point, or upon his quatre-point preferable to his cinque-point—for a reason before mentioned: all the men the adversary plays upon his trois or deuce-points are deemed lost, being greatly out of play; so that those men, not having it in their power to make his cinque-point, and his game being crowded in one place, and open in another, the adversary must be greatly annoyed by the player.

If the player have two of his adversary's men in his tables, he has a better chance for a hit than if he had more, provided his game is forwarder than that of his antagonist; for if he had three or more of his adversary's men in his tables, he would stand a worse chance to be hit.

When a player is running to save the gammon, if he should have two men upon his ace-point, and several men abroad, although he should lose one point or two in putting his men into his tables, it is to his interest to leave a man upon his adversary's ace-point, because it will prevent his adversary from bearing his men to the greatest advantage, and, at the same time, the player will have a chance of his adversary's making a blot, which he may chance to hit. However, if a player find, upon a throw, that he has a probability of saving his gammon, he should never wait for a blot, as the odds are greatly against his hitting it, but should embrace that opportunity.

Baldness.—Hair, the universal vanity, has been seized upon universally by the quacks; it has proved to them the true Golden Fleece. Science, as though such a subject were beneath its attention, has left the care of the most beautiful ornament of the body in the hands of charlatans. Only two or three scientific persons have ever treated at any length of the hair, or have shown, by the light of physiology, what art is capable of doing, and what it is powerless to do, in cases of disease and baldness.

Those who understand how the hair is nourished, can but smile at the monstrous gullibility of the public in putting such faith in the puffs and extracts of the hair-restorers. Really, the old joke of the power of a certain preparation to restore the bald places in hair-trunks and in worn-out boas, has become a popular belief. There is one fact which every one should know, and which would be sufficient to rout at once all the trash with which people load their heads. The blood is the only regenerator of the hair; oils and pomades may for a time moisten and clog the hair, but over its growth or nourishment they are absolutely powerless. The fine network of vessels on which the bulbs of the hair rest is alone capable of maintaining its healthy existence. To a sluggishness in the capillary circulation, baldness is mainly due; when this sluggishness is the result of a general failure of the system, consequent upon age, no art will avail—the inevitable Delilah proceeds unchallenged with her noiseless shears. When, on the contrary, baldness proceeds from any temporary cause—when the bulb still remains intact—slight friction, with a rough towel or a brush, aided by some gently irritating pomade, is the only course to be pursued. Baron Dupuytren, who made baldness the subject of a chapter in his great work on skin disease, gives the following recipe, which seems calculated to produce the desired result—

to promote capillary circulation and a consequent secretion of the materials of hair growth:—

Purified beef marrow	8 drachms.
Acetate of lead	1 drachm.
Peruvian balsam	3 drachms.
Alcohol	1 ounce.
Tincture of cantharides	15 drops.
Cloves and canella	15 drops.

Mix.

—See *Hair, Preservation of the.*

Bank of England, Transfer Days at.—

3 per Cent. Consols	Tuesday,
New 3½ per Cent. Annuities, 1854	Wednes., Thursday
New 2½ per Cent. Annuities	and
New 5 per Cent. Annuities	Friday.

Dividends on the above are due January 5 and July 5; and payable four or five days after, from 9 until 3 o'clock.

3 per Cent. Reduced Annuities	
New 3 per Cent. Annuities	Tuesday,
Annuities for terms of years	Wednes.,
Annuities for 30 years, from April 5, 1855	Thursday & Friday.
Bank Stock	

Dividends due April 5, October 10, and payable as above. Private days—Monday until 3, and Saturday until 1.

India Stock (Div. 10½ per cent.): Tuesday, Wednesday, Thursday, and Friday.

India 5 per Cent.: Tuesday, Wednesday, Thursday, and Friday. Dividends due January 5 and July 5.

India 4 per Cent. Transfer Loan Stock: Tuesday, Wednesday, Thursday, and Friday. Dividends due 25th April and 25th October.

India Bonds (Div. 4 per. Cent.): Tuesday, Wednesday, Thursday, and Friday. Dividends due March 31 and September 30.

Barbel.—This fish, so well known to anglers, is so called from its four barbs, two of which are at the corners of its snout. It is a heavy, dull fish, and gives, in proportion to its size and strength, very inferior sport to those who pursue it. They begin to shed their spawn about the middle of April, and come into season about a month or six weeks after. In their usual haunts among weeds, &c., they are fond of rooting with their nose like a pig. In summer, they frequent the most powerful and rapid currents, and settle among logs of wood, piles, and weeds, where they remain for a long time apparently immovable; during the winter time, they return to deep bottoms. The most killing baits for barbel are the spawn of salmon-trout, or, indeed, of any fish, especially if it be fresh, respecting which the barbel is very cunning; the pastes that imitate it must, therefore, be well made and of fresh flavour. It is also an advisable plan to bait the water overnight, by spawn or a quantity of cut worms. The barbel will also bite well at the lobworm, gentles, and cheese soaked in honey. The rod and line with which you fish for barbel must both be extremely long, with a running plummet attached to the latter, as they swim very close to the bottom. By a gentle inclination of the rod it is easily ascertained when there is a bite; immediately upon which the fish should be struck, and seldom escapes unless he breaks the line.

Bargain-making.—The love of bargain-making assails both sexes. We cannot understand why it is that a feeling of exultation springs up within us the moment we fancy ourselves possessors of a bargain. It seems scarcely an honest principle which can induce us to be pleased at a supposed advantage we gain over the manufacturer or tradesman. It would be a far higher feeling which prompted a purchaser on entering a shop to desire only a just exchange of commodity and specie. The buyer must endeavour to decide upon the real value of the articles laid before her, and to satisfy herself that she is not called upon to pay more for the articles she buys than what is reasonable. If the price exceed her expectation, it is the more just to bring down her wishes to the purchase of articles of lower value than to attempt, as many do, to beat down to your own terms the price of those of higher value. The tradesman is unjust to himself if he permit you to buy from him at too low a rate, and unjust to you if he require from you more than the goods in question are worth. In all steady, reputable shops the prices will be found nearly the same, according to the state of the markets.

Those, also, who are fond of bargains, lose more time in hunting after them than the difference of the price in the articles they purchase can compensate, were even the principle upon which they act a proper one. This ranging from shop to shop has also given origin to a fashionable method of killing time, which is well known by the term "shopping," and is literally a mean and unwarrantable amusement at the expense of the tradesmen and shopkeepers who are subjected to it. Some ladies make a practice to get down half the goods in a haberdasher's shop upon the counter, and, after talking for an hour or two on their qualities and prices, leave the shop without making a purchase.

There may be some variation occasionally in the price of goods amongst honest traders, from accidental circumstances; but, generally speaking, respectable tradesmen pretty well agree in the prices, and are satisfied with fair profits.

Tradesmen that are to be depended on rest their prosperity upon the approbation of steady customers and fair dealing, and will not willingly offer them goods which are bad in quality and which would prove unserviceable; while those who do business to please "bargain-makers" are not over scrupulous about the quality of the articles they sell.—See *Marketing and Shopping.*

Barley Sugar, TO MAKE.—The following will be found a simple and easy mode of making barley sugar. Put two tablespoonfuls of pure vinegar at the bottom of a half-pint cup and fill it up with water; put into a saucepan (brass is the best), and add to it two pounds of loaf sugar; boil this on a clear cinder fire about a quarter of an hour, stirring it all the time. In about that time the liquid will be turning a nice lemon colour, when it will be ready to take off, and dip the pan into a pail of cold water for a moment, as the heat of the pan and sugar alone might slightly overdo it. Then drop ten or twelve drops of essence of lemon into the mixture, and pour out into a large flat dish, previously well oiled with butter, and cut up into any form you like when the barley sugar has a little cooled.

Barometer, RULES FOR STUDYING THE.—The following are the most important notes to be observed in studying the movements of the barometer:

1. The barometer is highest of all during a long *frost*, and it generally rises with a north-east wind, and the reason assigned is, that a long frost greatly condenses the air, and the more condensed the air is, the greater is its pressure on the mercury of the barometer. The north-east wind has the same effect, being both cold and dry, and therefore condensed and heavy.

The second special rule is, that the barometer is lowest of all during a thaw following a long frost, because the air then becomes saturated with vapour, which makes the air lighter. The barometer is also very low during a south-west wind, because those winds are heavily laden with vapour.

The *third* rule to be observed is, that while the barometer stands below 30, the air is sure to be dry or very cold, or both, and rain may be expected. Very dry air absorbs the moisture, and will not part with it in the form of rain; and very cold air is so much condensed that it has already parted with much of its moisture.

The *fourth* rule is, that when the barometer stands very low indeed, there will never be much rain—although a fine day will seldom occur. At such times, short, heavy showers, with squalls of wind, may be expected. When the barometer is very low, the air must be very warm, or very moist, or both; but the air will not part with its moisture, but absorb more, until a cold air is introduced. This will condense the vapour—that is, there will be rain—but the barometer will not remain at its extreme depression.

5. In summer (after long continued fine weather), the barometer will gradually fall for two or three days before the rain comes. If the fall be very sudden, a thunderstorm may be expected.

6. If the barometer is low during very fine weather, the face of the sky will soon be overcast.

7. Dark, dense clouds, will pass over without rain, when the barometer is high; but if low, it will often rain without any appearance of clouds.

8. If in frosty weather it begins to snow, the barometer generally rises to 30, where it remains so long as the snow continues to fall. If after this the weather clears up, very severe cold may be expected.

THE FALL OF THE BAROMETER.

The following observations are also of importance:—

In *very hot* weather the fall of the mercury denotes *thunder*. Otherwise, a sudden fall denotes high wind.

In *frosty* weather the fall of the barometer denotes thaw.

If *wet* weather happen soon after the fall of the barometer, expect *little* of it.

In *wet* weather, if the barometer fall, expect much wet.

In *fair* weather, if the barometer fall much, and remain *low*, expect much wet in a few days, and probably wind.

N.B.—The barometer sinks lowest of all for wind and rain together; next to that, for wind (except it be an east or north-east wind).

THE RISE OF THE BAROMETER.

In *winter*, the rise of the barometer denotes *frost*.

In *frosty* weather the rise of the barometer indicates *snow*.

If *fair* weather happen soon after the rise of the barometer, expect but little of it.

In *wet* weather, if the barometer rise high, and *remain* so, expect continued fine weather in a day or two.

In *wet* weather, if the mercury rise suddenly very high, fine weather will not last long.

If the motion of the mercury be unsettled, expect unsettled weather.

N.B.—The barometer rises highest with north and east winds; for all other winds it sinks.

A good barometer is a very interesting as well as a very useful article, and a good ornament to a room, hall, or staircase. But we must advise our readers to purchase one of the "straight-ups." A really good barometer cannot be purchased under four guineas. If they already possess a wheel barometer, they would not do amiss to get it changed for the other kind. In many cases this could be done at little or no expense, as the wheel barometer is the more *expensive* instrument.

Baronet.—This order, instituted by James the First, was suggested by the minor barons, so-called, to distinguish them from the great barons, though both barons by tenure, the one retaining their territorial possessions, the others having alienated them. The title is, however, of very ancient standing both in England and France, and was used by the former for *banneret*, when it was meant to designate a knight-banneret, who had the privilege of sitting in Parliament. When the hereditary order was instituted, or revived, it happened that a rebellion raged in the northern province of Ireland, and it was therefore deemed expedient that such newly created baronets should, after the example of the ancient knights, who rendered due service to the sovereign, pay into the exchequer a sum of money adequate to the maintenance of thirty soldiers for three years, at eightpence a-day; this sum, increased by fees, amounted to nearly £12,000. It was further required that the candidate should be a gentleman by birth, and in the possession of a clear estate of £1,000 a year.

The word "Sir" is affixed to the Christian name of a baronet, as it is used before that of a simple knight, and his wife is addressed and styled "Lady."

A letter to a baronet is superscribed—"To Sir A—— B——, Baronet (or Bart.)," to a knight—"To Sir A—— B——."

Barons, by Letters Patent.—The sovereign in olden times used to invest a newly created baron in open Parliament, and so late as the time of James I., that monarch in person solemnly enrobed each peer in scarlet, with a furred hood; but in the same year it was determined to discontinue these ceremonies in future, the delivery of letters patent being deemed sufficient.

Barons, when addressed officially by the crown, are styled, "Right trusty and well-beloved."

Letters sent to them by private persons

must bear a superscription, as follows:—"To the Right Honourable," &c.

Baskets, Alum, to Make.—Success in making these kinds of baskets depends somewhat on chance; for the crystals will sometimes form irregularly, even when the utmost care has been taken. Dissolve alum in a little more than twice as much water as will be necessary for the depth of the basket (handle and all). Put in as much alum as the water will dissolve; when it will take no more, it is then called a saturated solution of alum. In this state it should be poured into a saucepan or earthen jar (by no means put it in an iron vessel), and slowly boiled until it is nearly half evaporated. The basket should then be suspended from a little stick, laid across the top of the jar in such a manner that both basket and handle will be covered with the solution. It must be set away in a cool place, where not the slightest motion will disturb the formation of the crystals. The frame may be made in any shape you please; it is usually made of small wire, woven in and out like basket-work. Many prefer a common willow basket; but whether it be wire or willow, a rough surface should be produced by binding every part with thread or worsted. Bright yellow crystals may be produced by boiling gamboge, saffron, or turmeric in the solution; and purple ones by logwood.

Bathers, Important Advice to.—The Royal Humane Society have issued the following advice to bathers:—

Avoid bathing within two hours after a meal.

Avoid bathing when exhausted by fatigue, or from any other cause.

Avoid bathing when the body is cooling after perspiration; but bathe when the body is warm, provided no time is lost in getting into the water.

Avoid chilling the body by sitting naked on the banks, or in boats, after having been in the water.

Avoid remaining too long in the water; leave the water immediately there is the slightest feeling of chilliness.

Avoid bathing altogether in the open air if, after having been a short time in the water, there is a sense of chilliness, with numbness of the hands and feet.

The vigorous and strong may bathe early in the morning on an empty stomach.

The young, and those that are weak, had better bathe three hours after a meal; the best time for such is from two to three hours after breakfast.

Those who are subject to attacks of giddiness and faintness, and those who suffer from palpitation and other sense of discomfort at the heart, should not bathe without consulting their medical adviser.

Beauty, Cultivation of.—In proportion as we have endeavoured to prove how small a part the features in themselves play as to the higher purposes of a face—namely, its identity and moral character—we have increased the responsibility of every one who carries a face as to the impression it ought to create. This responsibility, of course, extends equally to man as to woman; but a larger sphere of it belongs to the latter. With her is associated a separate idea, that as beauty is proper to her, the loves and the graces are felt to reside naturally in a woman's countenance, but to be quite out of place in a man's. His face is formed to be clean, and may be allowed to be picturesque—but it is a woman's business to be beautiful. Beauty of some kind is so much the attribute of the sex, that a woman can hardly be said to feel herself a woman who has not, at one time of her life at all events, felt herself to be fair. Beauty confers an education of its own, and that always a feminine one. Most celebrated beauties have owed their highest charms to the refining education which their native ones have given them. It was the wisdom as well as the poetry of the age of chivalry that it supposed all women to be beautiful, and treated them as such. A woman is not fully furnished for her part in life whose heart has not occasionally swelled with the sense of possessing some natural abilities in the great art of pleasing, opening to her knowledge secrets of strength, wonderfully intended to balance her muscular, or—if it may be—her general weakness. And herein we see how truly this attribute belongs to woman alone. Man does not need such a

consciousness, and seldom has it without rendering himself extremely ridiculous; while to a woman it is one of the chief weapons in her armoury, deprived of which she is comparatively powerless. What can be more cruel than the continual forcing upon a young girl the withering conviction of her own plainness? If this be only a foolish sham to counteract the supposed demoralising consciousness of beauty, the world will soon counteract that; but if the victim have really but a scanty supply of charms, it will, in addition to incalculable anguish of mind, only diminish these further still. To such a system alone can we ascribe an unhappy, anomalous style of a young woman, occasionally met with, who seems to have taken on herself the vows of voluntary ugliness, who neither eats enough to keep her complexion clear nor smiles enough to set her pleasing muscles in action—who prides herself on a skinny parsimony of attire which she calls neatness—thinks that alone respectable which is most unbecoming—is always thin, and seldom well, and passes through the society of the lovely, the graceful, and the happy, with the vanity that apes humility on her poor disappointed countenance, as if to say, "Stand back, I am uncomelier than thou."

Mrs. S. C. Hall says: "Beauty of the face depends more upon the movement of the face than upon the form of the features when at rest. Thus a countenance habitually under the influence of amiable feelings acquires a beauty of the highest order, from the frequency with which such feelings are the originating causes of the movement or expressions which stamp their character upon it."

How goodness heightens beauty!

Beauty, The Art of.—The following passage, by Mrs. Jamieson, we cordially recommend to our lady readers:—"In the morning use pure water as an ablution; after which they must abstain from all sudden gusts of passion, particularly envy, as that gives the skin a sallow paleness. It may seem trifling to speak of temperance, yet this must be attended to both in eating and drinking, if they would avoid pimples. Instead of rouge, let them use moderate exercise, which will raise a natural bloom in their cheeks, inimitable by art. Ingenuous candour, and unaffected good humour, will give an openness to their countenance that will make them universally agreeable. A desire of pleasing will add fire to their eyes, and breathing the air of sunrise will give their lips a vermilion hue. That amiable vivacity which they now possess may be highly heightened and preserved, if they would avoid late hours and card-playing, as well as novel-reading by candle-light, but not otherwise; for the first gives the face a drowsy, disagreeable aspect; the second is the mother of wrinkles; and the third is a fruitful source of weak eyes and a sallow complexion. A white hand is a very desirable ornament; and a hand can never be white unless it be kept clean. Nor is this all, for if a young lady would excel her companions in this respect, she must keep her hands in constant motion, which will occasion the blood to circulate freely, and have a wonderful effect. The motion recommended is working at her needle, brightening the house, and making herself as useful as possible in the performance of all domestic duties."

Bed Furniture, Cotton, and Printed Calicoes, To Wash.—Get rid of as much dirt as possible, by brushing and shaking. Do not let the dirty things lie about in a damp washhouse, or in any way become damp before they are fairly wetted. On no account use a particle of soda, pearlash, or anything of the kind. Allow plenty of water, and plenty of room in the tub. Use soft water, no hotter than would be pleasant for washing the hands. Rub with soap in the ordinary way. Mottled soap is preferable to yellow. If a general wash is about, the water in which flannels have been washed a second time does very well for the first washing of coloured things; or that in which muslins have been washed a second time, provided no soda or anything else of the kind was used. When the first washing is completed, have ready another tub with water of the same degree of warmth, into which put each piece, immediately on wringing it out of the first water. Repeat

the process of washing in the second water, carefully observing that every part is clean. On wringing out of the second water, immediately plunge each piece into cold *spring* water for rinsing. On wringing each piece out of the rinsing water, immediately hang it out, and let it dry as quickly as possible. In hanging up, put any thick double parts next the line; let the thinner part hang down and blow about. When these are dry, the portions may be changed, and the thick parts hung downwards. If, through unfavourable weather, or any circumstance, the drying cannot proceed at once, the things had better remain all night in the rinsing-water than be laid about damp. If they are half-dry out of doors, when taken in for the night let them be hung or spread in a room, and again hung out early next day. If there is no chance of favourable drying abroad, they should be quickly dried before a fire or round a stove. If starching is required, a sufficient quantity of made starch may be stirred into the rinsing-water.

Beer Measure.—

2 Pints	... make	1 Quart.	*qt.*
4 Quarts	... ,,	1 Gallon.	*gal.*
9 Gallons	... ,,	1 Firkin.	*fir.*
2 Firkins or 18 Gallons	... ,,	1 Kilderkin.	*kil.*
2 Kilderkins or 36 Gallons	.. ,,	1 Barrel.	*bar.*
1½ Barrels or 54 Gallons	... ,,	1 Hogshead.	*hhd.*
2 Barrels or 72 Gallons	... ,,	1 Puncheon.	*pun.*
3 Barrels or 108 Gallons	... ,,	1 Butt.	*but.*

Bible, The.—This, the first book, the best book, and the oldest book in all the world, contains 3,566,480 letters; 810,697 words; 31,173 verses; 1,189 chapters; 66 books. The word *and* occurs 46,227 times; the word *reverend* only once, which is in the 9th verse of the 111th Psalm; the word *Lord*, 1,855 times; the middle and least chapter is the 117th Psalm; the middle verse the 8th of 118th Psalm; and the 21st verse of the 9th chapter of Ezra contains the alphabet. The finest chapter to read is the 26th of Acts; the 19th chapter of second book of Kings, and the 37th of Isaiah, are alike. The least verse is the 33rd of the 11th chapter of John; and the 8th, 15th, 21st, and 31st verses of the 107th Psalm, are alike. Each verse of the 136th Psalm ends alike; there are no words or names in the Bible of more than six syllables.

The Bible is the schoolboy's spelling-book and the learned man's masterpiece! It contains a choice grammar for a novice, and a profound treatise for a sage; it is the ignorant man's dictionary and the wise man's directory. It affords knowledge of witty inventions for the ingenious, and dark sayings for the grave; and it is its own interpreter. It encourages the wise, the peacemaker, the racer, the overcomer, and promises an eternal reward to the moral conqueror. And that which crowns all is that the AUTHOR is without partiality, and without hypocrisy, for "in Him is no variableness nor shadow of turning."

Bible, The best Means of Studying through the Year.—This is an interesting and important subject. Presuming that you have already read the Bible entirely through, we will endeavour to point out how you may most spiritually and intellectually profit by it. Should your knowledge of Hebrew and Greek not be extensive enough to permit you to read the Bible in the original tongue, there are able commentaries which, if you consult them, will, in a great measure, supply the deficiency.

We do not advise you to cull out detached texts for study; as although such a plan may be sometimes profitably adapted for daily meditation, yet, for deeper research, a more regular course of reading is, in our opinion, preferable.

Make yourself thoroughly acquainted with the geography of the Bible, that you may be able to follow the Israelites in their wanderings, to become familiar with the dwelling-places of the seers, to track the path of the warrior, to find the abode of kings, to know the sites of once flourishing, but now ruined cities, and to trace the journeyings of Paul, and the footsteps of our Blessed Lord.

The extensive knowledge also which ancient history affords us is too valuable to be dispensed with.

We will suppose you to have arrived at a particular era—the exodus of the Israelites, the building of the Temple, the birth of Christ, or any other period of extraordinary interest. Ascertain the condition of the Jewish and surrounding nations at that period; the progress of the arts, science, and commerce; endeavour to become acquainted with the literature and philosophy of the age; the characters of the principal men who flourished then; the various modes of warfare, and what nations were engaged in it; and the state of the world at that time—physically, morally, and politically.

There are likewise other branches of knowledge which will be useful to you in your researches—astronomy, geology, botany, &c. By studying these, in connection with God's Word, you will be the better able to understand and appreciate what you read.

Your object should also be to acquire spiritual instruction from the sacred page. "From historic Christianity each person must pass to vital Christianity;" and "conscience is guided by the truths of the Bible." Through that Book, "the soul is instructed in the character of God—enriched by the study of the life of Christ—informed of its destiny—impressed with its duty—purified by its truths, and brought into communion with the patriarchs and the saints of old!"

How essential then it is that you should, with simplicity and earnestness, search those Scriptures which "are able to make you wise unto salvation;" carefully and prayerfully examine the doctrines they contain; arrive not at hastily-formed conclusions respecting them, but endeavour to profit by the investigations of wise and good men; yet be not influenced by their prejudices. Meditate frequently on what you read; and, above all, make the Bible the guide for your life. An eminent heathen writer said—"I see and I approve the right, but I follow the wrong." With a consciousness of what is right, let not this be your case, but rather, as a learned divine says, "Let the Bible be the light of your understanding, the joy of your heart, the fulness of your hope, the mirror of your thoughts, the consoler of your sorrows, the guide of your soul through this gloomy labyrinth of time, the telescope sent from heaven to reveal to the eye of man the amazing glories of the far-distant world. Every promise in it invites you to heaven—every precept commands, every exhortation urges thither."

Billiards.—This elegant and popular game may be said to include the elements of golf, bowls, and other sports, in which objects are driven forward from the hand. It cannot be certainly gleaned which country—England or France—originated it. We know, however, that it must be as old as the sixteenth century, for it is mentioned by Shakespeare.

The game is played with a table, three balls, and certain kinds of rods or cues. Two of the balls are white, and one red. The table is variable in size, but commonly twelve feet long, and six feet wide. Level and smooth it must be, and is generally made of slate, and covered with the finest green cloth. Round the table is a ledge, two inches high, and ordinarily stuffed with india-rubber. At each corner, and in the middle of the table, are pockets, six in all. The openings of the pockets are level with the surface, which permits the ball easily to enter. The three balls vary in diameter from an inch and a half to two inches, and are made of ivory. One of the white balls is distinguished by a spot. The game is played by two players; he who owns the spotted ball is designated spot, while the other is termed plain. The red ball is neutral, and belongs to neither player.

In playing, the left hand is rested with the palm underneath, on the table. The palm is hollowed, and the thumb, close to the fore-finger, is raised up to form a rest for the cue. The hand should be about five inches from the ball. The cue should be held lightly in the right hand, the stroke being made with the pointed extremity, and the ball struck in the required direction, and with that exact degree of force which will make it perform the desired feat. It is usual with most players to chalk the point of the cue to prevent slipping.

For playing the winning and losing game the table is laid out as follows:—At the distance of thirteen inches from one end, in the centre of the table, is a small dot in the cloth called the winning and losing spot; the winning spot is a little lower down; there are also the centre spot (exactly in the middle of the table) the baulk spot, and two other spots. At twenty-eight inches from the other, which we shall call the upper end of the table, a line is made across by a chalked string; then, taking the centre of this line, a semi-circle of eleven inches' radius is drawn from it, between the chalk line and the upper end of the table. The space enclosed by the semi-circle is called baulk.

The first stroke or lead is determined by lot. This is called stringing for the lead. Each player hits his ball from the string, or line, and he who causes it to rebound from the bottom cushion and come back nearest to the upper cushion, has the lead and the choice of the balls.

The first player begins by striking his ball from baulk against the red ball, as previously mentioned, and if he pockets the red ball, he scores three; if both, he scores six, and begins again. So long as he pockets, or scores, his adversary does not get a stroke. If the player miss, his adversary takes his turn. Both now play alternately, hitting the balls where they chance to lie; but when one pockets his own ball, he starts afresh by striking from baulk. If the player strike both the red and his adversary's ball, it is termed a cannon, and scores two. The beginner will, however, derive more benefit by studying the rules, than from any description we can offer.

A person in attendance, called the marker, scores, or keeps reckoning of the play. He does this by means of a marking board, which has indicators and two rows of figures—one for plain, and the other for spot. Technically, when a point is gained, he scores one for plain, or one for spot.

Winning and Losing Game.—1. The game is twenty-one in number, though sometimes played twenty-four, fifty, sixty-three, one hundred, or more; but twenty-one is the regular game.

2. At the commencement, both persons string for the lead and choice of balls, except when any points are given; then the person receiving the odds plays off at the beginning of the match, and the winner of each game leads afterwards.

3. In stringing, the person who brings his ball nearest the cushion, in baulk, has the option of playing first or not, and choice of balls, except when his ball touches the other or goes into a pocket; in either of which cases the adversary has the option.

4. At the beginning of the game, the red ball is to be placed on the spot at the further end of the table, and replaced there on being put into a pocket, knocked off the table, or when the balls are broken after a foul stroke; but should any ball be on, or so near the spot as to prevent the red being placed there without touching the other, in that case the red must be placed in the centre of the table.

5. The points of the game are scored as follows:—One point for a miss, two for a cannon, two for a white hazard, three for a red hazard, three (to your opponent) for running a coo or knocking your own ball off the table without touching any of the others.

6. A white winning hazard is made when you play at the white ball and pocket it; a white losing hazard, when you pocket your own ball off the white.

7. A red winning hazard is made when you pocket the red; a red losing hazard when you pocket your own ball off the red.

8. A cannon is when your ball strikes the other two.

9. A coo is when your ball goes into a pocket, or jumps off the table without touching either of the others.

10. A four-stroke is made by playing at the white, making a cannon, and pocketing your own or adversary's ball; or you pocket his and your own without the cannon; or, by playing at the red, making a cannon, and pocketing your opponent's ball.

11. A five-stroke is made by playing at the red, making a cannon, and pocketing your own or the red; or pocketing the red and your adversary's ball without the cannon; or you pocket your own and adversary's ball off the red; or you play at the white, make a cannon, and

pocket the red; or you play at the white, and pocket your own and the red.

12. A six-stroke is made by playing at the red, and pocketing it and your own; or striking the white first, making a cannon, and pocketing your own and adversary's ball.

13. A seven-stroke is made by playing at the red, making a cannon, and pocketing your own and adversary's ball; or by playing at the white first, making a cannon, and pocketing your own or adversary's and the red; or by striking the white, and pocketing all the balls without a cannon.

14. An eight stroke is made by playing at the red ball, making a cannon, and pocketing your own and the red; or if you strike the red and pocket all the balls without the cannon.

15. A nine-stroke is made when you cannon by striking the white first and pocketing all the balls.

16. A ten-stroke is made when you cannon by playing at the red first, and pocket all the balls. This is the greatest number that can be made.

17. If the striker, in making a cannon or hazard, should by accident touch either of the balls with his cue, hand, or otherwise, his adversary can, if he think proper, claim it as a foul, and have the balls broken; in which case the points made by such stroke are not scored, and the person claiming the foul stroke leads off.

18. Foul strokes are made as follows: namely, when the striker's ball touches either of the others; touching any ball while rolling; moving another ball in any way while taking aim or in the act of striking; pushing the balls together when playing with the *butt* of the cue; playing with both feet off the floor; playing at a ball before it has done rolling; or by playing with the wrong ball; in this latter case, should a hazard or cannon be made, the adversary can have the balls broken and lead off; and should no score be made by such stroke, he can take his choice of balls and play.

19. In breaking the balls, you take them all off the table, place the red on the spot, and both parties play from the baulk.

20. If the balls have been changed, and it cannot be ascertained by whom, the game must be played out with them as they are; or even if two strokes have been made before the mistake is discovered, it must still be played out in the same way.

21. Should the striker, in making a cannon or hazard, knock his own or either of the balls off the table, he cannot score the points made by such stroke, and the opponent plays, but the balls are not broken.

22. If a ball stop on the edge of a pocket, and afterwards fall in, either by shaking the room, table, or other accident, it must be replaced as near the original place as possible.

23. Should the striker, when in hand, play at a ball in baulk, his adversary has the option of scoring a miss, or having the balls replaced and the stroke played again, or of breaking the balls.

24. If the striker's ball touch another, he must play, and should he make a cannon or hazard, his adversary can claim it as foul, or he can allow points to be scored and the person to play on; but should the striker not score, it is at the option of his opponent to break them or not.

25. Should the marker, whilst marking for the players, by accident touch either of the balls, while rolling or not, it must be placed as near as possible to the place it would have occupied.

26. If the last player should alter the direction of a ball while rolling, with cue, hand, or otherwise, the striker may place it where he thinks proper.

27. A line-ball is when either the white or red is exactly on the line of the baulk, in which case it cannot be played at by a person whose ball is in hand, it being considered in baulk.

28. If the striker's ball is over the pocket, and he should, in the act of striking, miss it, but, in drawing his cue back, knock it into the pocket, he will lose three points, it being a coo.

29. If the red ball have been put into a pocket, it must not be placed on the spot till the other balls have done rolling, should there be a probability of either of them touching it again, as the stroke is not finished till the balls stop.

30. If the striker should touch his ball by accident, when taking aim, it is not a stroke, and the ball is to be replaced; but should he touch it in the act of striking, then it is a stroke.

31. If either of the balls lodge on a cushion, it is off the table, and should a cannon or hazard be made, it does not score, and the ball must be placed on the spot, or played from the baulk, according to what ball it is, white or red.

32. Any person refusing to play the game out after he has played one stroke, loses it.

33. In a match of four, the game is thirty-one, and each person is at liberty to offer his partner advice.

34. All disputes in the game to be decided by the marker, or a majority of the company; but no person has a right to interfere until appealed to by one or both players.

35. It is a love-game when no hazard has been made by the loser.

36. All camp-games are played sixteen up.

Billion, A.—A billion—a million times a million—is quickly written, and quicker still pronounced. But no one is able to count it. You count 160 or 170 a minute; but let us even suppose that you go as far as 200, then an hour will produce 12,000; a day 288,000; and a year of 365 days (for every four years you may rest from one day counting during leap year), 150,120,000. Let us suppose, now, that Adam, at the beginning of his existence, had begun to count, and continued to do so to the present time; still he would not have counted near enough; for to count a billion he would require 9,512 years, 34 days, 6 hours and 20 minutes, according to the above rule. Now supposing we were to allow the poor counter twelve hours daily for rest, eating, and sleeping, he would need 19,024 years, 69 days, 10 hours and 40 minutes.

Bills of Exchange (Inland) or Promissory Notes.—

Not above	£5...0 0 1
Above £5 and not above	£10...0 0 2
„ £10 „	£25...0 0 3

And 3d. additional for every £25 up to £1,000.

Birds, in their Natural Feathers, to Produce.—To produce pictures of birds with their natural feathers, is a very delightful and instructive employment. Take a thin board, or panel of deal, and smoothly paste on it two or three layers of white paper. When the paper is quite dry, get any bird you wish to represent, and draw its figure as exactly as possible on the papered panel; then paint what tree or ground-work you intend to set your bird upon, also its bill and legs, leaving the rest of the body to be covered with its own feathers. Next prepare that part to be feathered by laying on thick gum arabic, dissolved in water. Two or three coats of gum are necessary in order to produce a good body on the paper. When your design is so far produced, take the feathers of the bird as you use them, beginning at the tail and the points of the wings, and working upward to the head, observing to cover that part of the draught with the feathers taken from the same part of the bird, letting them fall over one another in the natural order.

You must prepare your feathers by cutting off the downy parts that are about their stems, and the large feathers must have the insides of their shafts shaved off with a sharp knife, to make them lie flat; the quills of the wings must have their inner webs clipped off, so that in laying them the gum may hold them by their shafts. When you begin to lay them, take a pair of steel pliers to hold the feathers in, and have some gum-water, not too thin, and a large pencil ready to moisten the ground-work by little and little, as you work it; then lay your feathers on the moistened parts, which must not be waterish, but *only clammy*, to hold the feathers. You must prepare some leaden weights, moulded in the shape of sugar-loaves by means of a stick, by casting the lead in sand.

These weights will be necessary to set on the feathers when you have merely laid them on, in order to press them into the gum till they are fixed; but you must be cautious lest the gum come through and smear the feathers.

Be cautious not to have your coat of gum too moist or wet. When you

have wholly covered your bird with its feathers, you must, with a little thick gum, stick on a piece of paper, cut round, of the size of an eye, which you must paint like the eye of a bird; glass eyes, however, may be purchased at the naturalists' shops. When the whole is dry, dress the feathers all round the outline, and rectify defects in every other part. Then lay on it a sheet of clean paper and a heavy weight, such as a book, to press it; after which it may be preserved in a glass frame, and forms a very pretty parlour ornament.

Birds, To Stuff.—Beginners in this interesting art should never attempt to stuff any bird smaller than a blackbird; the larger the bird the easier it is to stuff. First, put a small quantity of cotton wool down the throat, in order to prevent any moisture escaping from the stomach; this is highly important, and must never be omitted; then break the bones of the wings close to the body; divide the feathers from the breast-bone to the vent; divide the skin in like manner. Great care must be taken not to puncture the abdomen; raise the skin with the point of a penknife until you can take hold of it with your finger and thumb; hold the skin tight, and press on to the body with the knife farther under, until you reach the thigh; break the thigh-bone close to the joint, and push it gently up until you can take hold of the flesh; now take the bone that is attached to the leg, and pull it gently out, turning the skin of the leg inside out; cut the flesh off close to the knee, and skin as far down to the back as you can. Do the same with the other side of the bird; if any wet escape from the flesh, dry it up with fresh bran. With a small pair of scissors, put the skin of both sides out of your way as much as possible; push the body up (the tail of the bird being held in your hand). Cut through as close to the tail as possible (this is done inside the skin); then take the bird by the back-bone, and gently push the skin down by the thumb-nail until you come to the wings; take as much flesh from the wing-joints as you can, and go on skinning till you reach the ears; take hold of them close to the skull and pull them out. Take the eyes out and be careful not to burst them, holding the skin with one thumb and finger, while you pull the eyes out of the skin with the other; after taking the eyes out put as much cotton in the sockets as will fill them nicely. Skin down to the beak very gently, cut the neck away from the skull, and also a piece of the skull to take the brains out; anoint the skin with arsenicated soap, put a little tow round the thigh-bones to form the thigh, and gently turn the skin back again; if care has been taken, the loss of the body will make but little difference to the size of the bird. Get three wires, one as long again as the bird, the other two twice the length of the legs, file them sharp at one end, bend the blunt end of the long wire, put some tow on the bend and squeeze it tight to fasten it, then twist the tow until it is about the size of the body, twisting as tight as possible. Have some tow cut up small, get a strong wire, rough one point, and turn the other into a bow to hold in your hand; take hold of some of the tow with the rough end, and push it up the neck; this requires but a small portion of tow; put some in the chest, and a little all over the inside of the skin. Put the body-wire up the neck, and bring it out through the skull at the top of the head; draw the body into the skin, and be careful not to stretch the neck; then put the other wires through the centre of the foot up the legs, being careful not to break the skin; put enough wire inside the skin to push into the body to fasten the legs; cut off a piece of the wire that has gone through the head, put it through the tail into the body (under the tail, of course); open the eyelids, and put in the eyes (patience is required in young beginners to do this). Mount the bird on a perch, fastened to a small board, bend the legs so that they will seem to stand in a proper position; be careful not to loosen the leg-wires from the body, bring the feathers nicely together between the legs, bend the neck, and put the head in the shape you think proper, then run a pin or a piece of wire through the butt of the wing and into the body, to keep it in its proper place.

Should the bird be out of shape in places, raise the skin gently with a needle, put the feathers as straight as you can, put a pin in the breast, back, and under each wing near to the top of the thigh, fasten the end of the cotton to one of the pins, and gently wind it round the bird from one pin to the other; put up the bird when you see that it is right. You had better let the specimen dry of itself, then bake it; keep it free from dust, and it will dry in a fortnight. Spread the tail in a natural position, and when it is dry unwind the cotton; cut the pins close to the butt of the wing and the head; take out the others, and the bird is finished.

Births, Registration of.—The Act requires that the father or mother of every child born in England (or in case of the death, illness, absence, or inability of the father and mother, the occupier of the house in which they reside), shall, within forty-two days next after the day of such birth, give information to the registrar of the parish where the child was born, without the payment of any fee, providing it is done within forty-two days; but if it is neglected after that period, it can be registered within six months of the birth, by the payment of 7s. 6d.; after six months it cannot be registered at all.

Biscuits, Anise.—Wash four drachms of anise seeds, and dry in the oven; work up the yolks of five eggs and a quarter of a pound of powdered sugar for about ten minutes; whip the whites to a strong froth and mix them lightly with the yolks; add a quarter of a pound of dry sifted flour and the anise; pour this paste into a paper case, 11 in. long by 9 in. wide. Bake it in a slow oven for about forty or fifty minutes, when, if firm, take it out. As soon as it is cold, remove the paper, and cut the biscuits into whatever form you please. Dry them in the oven until they become brittle.

Biscuits.—See *Bread and Biscuits.*

Bishops.—See *Archbishops.*

Bitters, To Make.—According to the flavour desired, take either of rum, brandy, or whisky, one pint; gentian and quassia root, three ounces of each; four ounces of dried orange-peel; cardamom seeds, half an ounce; allow the whole to steep for nine or ten days, then strain through muslin, and it is fit for use. If agreeable to the taste, half an ounce of cinnamon or nutmeg may be added to the other ingredients.

Blancmange, To Make.—Get four calf's-feet; if possible, some that have been scalded, and not skinned. Scrape and clean them well, and boil them in three quarts of water till all the meat drops off the bones. Drain the liquid through a colander or sieve, and skim it well. Let it stand till next morning to congeal. Then clean it well from the sediment, and put it into a tin or bell-metal kettle. Stir into it three quarters of a pint of cream, and sweeten to taste. Boil it hard for five minutes, stirring it several times. Then strain it through a linen cloth or napkin into a large bowl, and add a little wine and rose-water. Set it in a cool place for three or four hours, stirring it very frequently with a spoon, to prevent the cream from separating from the jelly. The more it is stirred the better. Stir it till it is cool. Wash your moulds, wipe them dry, and then wet them with cold water. When the blancmange becomes very thick (that is, in three or four hours, if the weather is not too damp), put it into your moulds. When it has set in them till it is quite firm, loosen it carefully all round with a knife, and turn it out on glass or china plates.

Bleak or Bray, The.—This is a common river fish—so called from its bleak, or white, appearance—that spawns in March, and is fond of many of the baits for trout. It is usually caught with a small artificial fly of a brown colour, and the hook should be suited in size to the fly. The bleak seldom exceeds 6 in. in length; its flesh is highly valued by epicures, and beads are made of its scales. (See *Artificial Flies.*)

Blinds, To Roll up.—There is often a great difficulty in making a blind roll nicely after it has been washed. This difficulty may be effectually obviated by attending to the following directions:—Be careful that in drying the blind it is not stretched out of shape by being thrown on a ledge of unequal

height, or pegged to a line in a crooked manner. The best mode of drying is to lay it lightly on an even grass plat. While there is a little moisture remaining, fold the blind by carefully placing the two *ends* exactly together—not the two *sides*, as is proper in folding most other things; then fold the middle to the two ends, and again fold in the same direction until it is a convenient width for mangling. There is to be no fold running from end to end of the blind. It may then be carefully mangled. It must be nailed exactly straight upon the roller, or it will not roll well, whether washed or unwashed.

Blushing.—Blushing proceeds from guiltiness or modesty. One or other causes the colour to mount to the cheek, and a stranger not acquainted with a person, seeing a look of confusion continually on the face, would judge that some great crime had been committed. What is more becoming to the youthful maiden than these blushes, which modesty always brings her? Beauty is by it tenfold increased. The exultant lover sees his affection returned in the crimson cheek and sparkling eye which his presence always brings. These speak plainer than words could when the tongue becomes mute under the influence of love, and words cease to express the feelings of the heart.

There is no deceit in a blush. No one can feign a blush; it must be natural or not at all, for it is the index of the heart. The tongue may confess the greatest love, but what is it without that unspeakable language which never deceives? Gentlemen always admire blushing ladies. It seems to tell them of a purity of the heart which all females should possess; and if it exist, it should certainly show itself in this external form. She who openly confesses to never having blushed, and boasts of it, can have but little of that heavenly virtue which surrounds the female character with such a cloud of loveliness.

But do not think that blushing is becoming to all. To matrons and married ladies it does not seem appropriate, from whom we expect so much dignity; and to a man it gives an effeminate look, to be continually blushing at every little incident that may happen to affect him. It is often very embarrassing, but those who are subject to it should never try to avoid it.

Blushing, Explanation of.—An emotion, sometimes pleasurable, sometimes painful, takes possession of the mind, and thereupon a hot flush is felt, the skin grows hot, and according to the intensity of the emotion, these changes are confined to the cheek only, or extend to the "roots of the hair" or "all over." What is the cause of these changes? The blood is a red and hot fluid; the skin reddens and grows hot because its vessels suddenly contain an increased quantity of this red and hot fluid; and its vessels contain more because the small arteries suddenly dilate, the natural moderate contraction of their muscles being superseded by a state of relaxation.

On the other hand, in many people, extreme terror causes the skin to grow cold and the face to appear pale and pinched. Under these circumstances the supply of blood to the skin is greatly diminished in consequence of an excessive stimulation of the nerves of the small arteries, which causes them to contract, and so cuts off the supply of blood.

Books, To Preserve.—Many valuable books are injured by those worst of *book-worms*, the *aglossa pinguinalis*, which deposits its larvæ in the autumn, especially in leaves nearest the cover. These gradually produce a kind of mite, which occasions the mischief. The point of attack is the binding. The best prevention against them is mineral salts. Alum and vitriol are proper for this purpose, and it would be advisable to mix a portion with the paste used in binding. It is also well to slightly powder the books, the covers, and even the shelves on which they stand, with a mixture of powdered alum and fine pepper, and to rub the covers of books twice a year with a piece of woollen cloth that has been steeped in a solution of powdered alum and dried.

Boots, To Waterproof.—A correspondent of *The Mechanics' Magazine* writes: "I have had three pairs of boots in the last six years (no shoes), and I

think I shall not require any more for the next six years to come. The reason is that I treat them in the following manner:—I put a pound of tallow and half-a-pound of rosin in a pot on the fire; when melted and mixed, I warm the boots, and apply the hot stuff with a painter's brush until neither the sole nor the upper leather will suck in any more. If it is desired that the boots should immediately take a polish, melt an ounce of wax with a teaspoonful of lamp-black. A day after the boots have been treated with tallow and rosin, rub over them this wax in turpentine, but not before the fire. The exterior will then have a coat of wax alone, and will shine like a mirror. Tallow, or any other grease, becomes rancid and rots the stitching as well as the leather; but the rosin gives it an antiseptic quality which preserves the whole. Boots and shoes should be so large as to admit of wearing cork soles."

A long experience has convinced us that a coat of gum copal varnish applied to the soles of boots and shoes, and repeated as it dries, until the pores of the leather are filled and the surface shines like polished mahogany, will make the soles waterproof, and also cause them to last three times as long as ordinary soles. This recipe is not generally known, but where it has been tried it has been much appreciated.

Bottled Fruits.—See *Adulterations.*

"Bouquet," Game of.—Each player in his turn supposes himself to be a bouquet, composed of three different flowers. Each one must name aloud to the leader of the game the three flowers of which he considers himself composed.

The leader of the game writes down the names of the three flowers, and adds to what he has written, without informing the other, the names of any three persons of the company he may choose.

He then asks the player to what use he intends to put the three flowers he has chosen. The player tells him to what use he means to put them, and the leader of the game applies it to the three persons' names that he has written down.

EXAMPLE.

The Leader of the Game.—Miss Julia, choose your three flowers.

Julia.—The marigold, the bachelor's button, and the rose.

Leader.—I have written them down. Now, what will you do with your marigold?

Julia.—I will throw it over my shoulder.

Leader.—And the bachelor's button?

Julia.—I will put it at my window.

Leader.—And the rose?

Julia.—I will put it on the mantel-piece.

Leader.—Very well; you have thrown Adolphus over your shoulder, you have put Miss Maria at your window, and adorned your mantel-piece with Charles. And now, Mr. Adolphus, it is your turn to speak. Choose your three flowers.

Bouquet, To Preserve a.—When you receive a bouquet, sprinkle it lightly with fresh water. Then put it into a vessel containing some soap-suds; this will nutrify the roots, and keep the flowers as bright as new. Take the bouquet out of the suds every morning and lay it sideways (the stem entering first) into clean water, keep it there a minute or two, then take it out, and sprinkle the flowers lightly by the hand with water. Replace it in the soap-suds, and it will bloom as fresh as when first gathered. The soap-suds need changing every three or four days. By observing these rules, a bouquet can be kept bright and beautiful for at least a month, and will last still longer in a very passable state; but attention to the fair but frail creatures, as directed above, must be strictly observed, or all will perish.

Boxes, Ornamental.—At certain seasons of the year, when we give and receive gifts (see *Presents*), any little article of our own work is very highly prized. A pretty and useful present may be made by ornamenting small boxes with sealing-wax. The following is the manner of doing them:—Having procured your box (round wooden boxes, that have been filled with tooth-powder, are much the best for the purpose; but any sort will do, provided it is strong enough); next get a large seal, some

good sealing-wax, and a small watch-key. A small gas-jet is rather better than a candle to melt the wax by, being not so liable to discolour it when the coloured sorts are used. Make an impression with the seal on the centre of the box-lid; then spread the wax around it evenly—as much as can be impressed at one time without cooling; then mark it all over, as closely as possible, with the pipe of the watch-key, repeating the process until the whole of the outside surface is entirely covered. Then finish off by lining them with velvet, cut out the exact size of the inside, and gummed in. They form exceedingly pretty ornaments for the toilet table, suitable for holding brooches, pins, &c. A little variation may be made by using red wax for the centre seal, and black for the small indentations.

BOYS, MANAGEMENT OF.—The worst kind of "spoiling" boys that we know of is the common form of over-petting and cosseting. This is a lady's question, and Cœlebs hardly dare say much about it. Generally speaking, a husband of any sense is able to counteract *that*. Boys must be put upon donkeys and ponies, accustomed to climb trees, and to venture themselves upon the ice, while they are still light and young, and tumbles don't hurt them, or they never will do so afterwards; and what a pitiable spectacle is that of a grown-up man who can't ride a horse, get a bird's nest, or "go along somehow" on skates without showing the white feather! Ladies love courage. Let mothers reflect on what they themselves thought of a "chicken" before they married, and bring up their boys accordingly. We now come to the other side of the question, and have a few words to say to those ineffably foolish parents who keep their children down. This, no doubt, is rather an old-fashioned error, but it is far from being extinct for all that. We have spoken of the mistake which people make by encouraging eccentricities in their children; but they surely make just as great a mistake by checking their natural aspirations. There are in the world people with so little self-confidence, so little knowledge of real life outside their own small circle, that the bare idea of their children being able to distinguish themselves seems to them monstrous. *Experto crede.* These words are not written without warrant for them. Children must not have "too grand ideas." They must not think they are going to do this, that, or the other in the world. They must not attempt to cope with people who are born with silver spoons in their mouths. It is quite absurd to suppose that in their humble station there can be any of the stuff that makes men wealthy and eminent. It is heresy and wickedness to entertain such an idea. Now, strange as it may seem, there really are people in the world who bring their children up on these principles, who try to crush in its infancy every tendency their children may show to raise themselves in life, and after they grow up would rather see them starve than advance a sixpence to help them in quite legitimate aspirations. It is difficult to get to the bottom of the state of mind in which such parents pass their lives. It seems to be a social conservatism of the stupidest and narrowest kind. The phenomenon is almost inexplicable, but it exists, if a phenomenon can be said to exist, and is opposed to all the healthiest traditions of a free country. A London middle-class solicitor thinks it a monstrous thing that his son should want to go into the army. A man in business thinks it a monstrous thing his son should want to go to Oxford. Don't they see that they are fighting against their own principles? No, they don't; they can't be made to see that. They want to "keep their children down," and what is the result? That, again, is an old story. The high-spirited or the scholarly boy goes to grief in law or business, who might have edited Æschylus, or led his regiment over a breach. A middle-class man should be proud of a son who shows fitness for distinguishing himself in professions which are supposed to be the monopoly of the aristocracy. To come back to the point from which we started—the management, namely, of young children—there is one thing to be laid down: let there be no divided rule in a house. Don't let children see that the

father means one thing and the mother another in their bringing up. They see the difference, if it exist, in a moment; and when they do, farewell to all wholesome parental influence. Husbands and mothers may talk too freely before their children, forgetful of their rising intelligence. And indeed nothing is more common than to get a wink from the head of the house, implying that you are to be upon your guard before Johnny or Tommy, who is listening open-mouthed to your witty narrative, while he himself the next moment will offend against his own precautions in the most barefaced manner by plunging headlong into your domestic controversy.

Braid Patterns, To Trace.—Draw the design on some thin writing-paper, then pierce the outline with a fine needle, and tack on the cloth, silk, &c. Lay the cloth evenly on a table, and keep it in its proper position by means of weights; then rub the tracing-pounce carefully and evenly through the perforations, remove the tacking-threads, and carefully raise and remove the paper design. Observe that no particles of the pounce have fallen on such parts as are not required; if so, remove them carefully by means of a damp camel's-hair pencil, and then hold a moderately-hot flat-iron at a sufficient distance to fix the design by melting the resin of the pounce; or, by omitting the resin in the pounce, the design may be traced in French or coloured chalks. As it is evident that the colour of the pounce should approach as near as possible to the braid or silk used, we recommend the following: for a cobalt, finely powdered stone-blue; yellow, yellow chrome; green, emerald green; orange, burnt sienna; red, lapis calaminaris; brown and black, burnt umber; a drab ground, French chalk or cuttle-fish bone. Each colour is to be mixed with white resin, in the proportion of one part of resin to seven of the colour.

Brain, Phenomena of the.—In the dream of Count Lavolette, cited by Dr. Winslow, the dreamer imagined that he stood in the Rue St. Honoré, in Paris, and for five hours saw troops of spectral cavalry march past him, with waggons full of the dead and wounded, and the whole dream only occupied a space of ten minutes, as he was able to discover on striking his repeater, for he had been aroused by the clock of the Palais de Justice striking twelve and the opening of the gate to relieve the sentry, had fallen asleep with the dim suggestion on his mind, and was again awakened by the relief party as they closed the gate after them.

Various cases of brain disorder are also on record, in which, immediately upon recovery, the persons have gone about doing the very things they had in hand when first taken ill; a lady going to her work-box to stitch the very piece of needlework she had been engaged with a twelvemonth previously to the breaking out of her complaint; and a British captain, after fifteen months' coma, from an injury to the head, immediately after an operation which relieved him, arising from his bed to give the very order he was going to present when struck by a shot at the battle of the Nile.

Bergmann observed a case in which a man, ninety years of age, was always under the impression that he was still only eighteen, at which period he became insane; and it is recorded of a clergyman, who was shot in the head when snipe shooting two days before his arranged marriage, and sank into a state of inoffensive lunacy, that for fifty years, the whole remainder of his life, he was occupied with nothing but the details of his wedding and the hopes of his married life.

Brass Inlaid Work, To Polish.—File the brass very clean with a smooth file; then take some Tripoli, powdered very fine, and mix it with the linseed oil. Dip in this a rubber of cloth, with which polish the work until the desired effect is obtained. If the work is ebony or black rose-wood, take some elder coal, powdered very fine, and apply it dry after you have done with the Tripoli and it will produce a superior polish. The French mode of ornamenting with brass differs widely from ours, theirs being chiefly water-gilt (*ormolu*), excepting the flutes of columns, &c., which are polished very highly with rotten-stone and finished with elder coal.

Bread and Biscuits.—The following directions for making these articles of food are copied from the "Transactions of the Chevange County Agricultural Society." They are the statements of the ladies, who received premiums for the best bread exhibited—

BROWN BREAD.—One quart of rye meal, two quarts of Indian meal, and two tablespoonfuls of molasses. Mix thoroughly with sweet milk, let it stand one hour, and then bake in a slow oven.

WHEATEN BREAD.—One spoonful of hop yeast, two potatoes boiled, and one pint of water; make a sponge, and when light or sufficiently raised, mix hard and let rise; and when it is light again, mould it over, and bake while light. *Another way* is to grate half-a-dozen potatoes, and add one quart of water; put in one cup of hop yeast at night, and in the morning, when light, add three tablespoonfuls of sugar and flour, to form a dough. Let it rise; when light, put it in tins; let it rise again, and bake for half an hour.

BISCUITS.—Take some of the bread dough in the morning, as much as would make a loaf of bread, and add a quarter of a pound of butter; mix well, let it rise, and then make into biscuits; let it rise again, and then bake.

TEA RUSKS.—Half a pint of new milk and one cup of hop yeast; add flour to make a batter, and set the sponge at night. In the morning add half a pint of milk, one cup of sugar, one of butter, one egg, one nutmeg, and flour to make it sufficiently stiff. Let it rise, then roll it and cut it out; let it rise again, and then bake.

Bread, Flour, &c., TABLE OF WEIGHTS AND MEASURES OF:—

	lbs.
A peck or stone of flour	14
A bushel of flour	56
A boll of 10 pecks or stones ...	140
A barrel of American flour ...	196
A pack or load of flour	240
A sack or 5 bushels of flour ...	280
A gallon of flour	7
A bushel of barley	47
" peas	64
" beans	60
" rye	50
" oats	40
A bushel of wheat	60
6 bushels of wheat yield of fine flour	280
280 lbs. of flour, 1 sack, make of white bread	400
8 bushels of wheat, 1 quarter, average of flour...	402
Ditto of bread	577
A man's average use of bread weekly	11
Ditto yearly ... ... which is the produce of 1 quarter of wheat.	572

Bread-making, ECONOMIC.—Take a pound and a half of whole rice, boil it gently over a slow fire in three quarts of water, for about five hours, stirring it occasionally, and afterwards beat it into a smooth paste. Mix this, while warm, into fourteen pounds of flour (*without any more water*) adding to it, at the same time, the usual quantity of yeast. Allow the dough to work the usual time near the fire, after which divide it into loaves, and it will be found, when baked, to produce from twenty-eight to thirty pounds of excellent white bread.

A Prebendary of Durham, writing to his Diocesan some years ago, states as follows:—

"I caused four bushels of wheat (nine-gallon measure) to be ground, and nothing but the coarse bran taken out, the produce was four bushels and a half of flour, and 22 lbs. of bran. About ten days ago I boiled some of the bran, and kneaded a due proportion of the flour with the strained liquor, and the result of the experiment was so highly satisfactory, that I resolved to repeat it with the most strict attention, and the most scrupulous exactness. The details of this second experiment I am now about to communicate to your lordship; and I thought proper to send you, also, some of the bread produced by it that you might form a judgment of its excellence. I took 5 lbs. of bran, boiled it, and with the liquor strained from it, kneaded 56 lbs. of flour, adding the usual quantity of salt and yeast. When the dough was sufficiently risen, it was weighed, and divided into loaves; the weight, before being put into the oven, being 93 lbs. 10 oz. It was then baked two hours, and some time after

being drawn, was weighed, and gave 83 lbs. 8 oz.—loss in baking, 10 lbs. 5 oz. The same quantity of flour, kneaded with common water, loses about 15 lbs. 11 oz. in the baking, and produces only 69 lbs. 8 ozs. of bread — gain by my method, 14 lbs.; that is, a clear increase of one-fifth of the usual quantity of bread from a given quantity of flour.

"The bran, after being used in this way, is fit for many domestic purposes, and I suspect, even more nutritious for pigs and poultry than if given to them raw." (See *Adulterations.*)

Breakfast.—The morning meal or breakfast—the "early bit" of the Germans—is, perhaps, the most important of the day. According to Erasmus Wilson, it is usually taken at eight or nine. The proper period for it must, however, depend upon the time at which the party rises. About an hour after leaving the bed will be found the most appropriate for the morning meal. By that time the powers of the system have fully recovered from the inactivity of sleep, and the functions of the stomach, and other viscera have again come into play. The appetite is excited, and needs appeasing; and both instinct and reason direct us to the social board. If abstinence is now prolonged the physical and mental energies, unsupported by a supply of food, which indirectly gives them birth, gradually lessen, and incipient exhaustion ensues. The fluids of the stomach and smaller tissues begin to act upon the coats of those viscera instead of the food, and an unpleasant feeling of hunger, or a loss of appetite comes on as a natural consequence. When breakfast cannot be taken within a reasonable period after rising, the gap should be filled up by chewing a crust, a biscuit, or the like. A raw egg or two, "sucked" from the shell, or broken into a tea-cup and drunk, will be found most valuable for the purpose. Raw milk, cheese, salted food, and other indigestible matter should be particularly avoided at this early period of the day.

Bream.—In fishing for bream the angler should be very silent, and take all possible care to keep concealed from the fish, which are angled for near the bottom. His tackle must also be strong. This fish, according to Dr. Shaw, is a native of many parts of Europe, inhabiting still lakes and rivers, and is sometimes found even in the Caspian Sea. Bream shed their spawn about midsummer, and although they are occasionally met with in slow-running rivers, are reckoned a pond fish, where they will thrive in the greatest perfection, and have been known to weigh from eight to ten pounds.

British Empire, Extent of the.—Without going into details on this subject, which would occupy too much space, an idea of the extent will be gathered from the following extract from "Finche's Boundaries of Empire."

"The Queen of England is now sovereign over one continent, a hundred peninsulas, five hundred promontories, a thousand lakes, two thousand rivers, and ten thousand islands. She waves her hand, and five hundred thousand warriors march to battle, to conquer or die. She bends her head, and at the signal a thousand ships of war, and a hundred thousand sailors perform her bidding on the ocean. She walks upon the earth, and one hundred and twenty millions of human beings feel the slightest pressure of her foot. Come, all ye conquerors, and kneel before the Queen of England, and acknowledge the superior extent of her dependent provinces, her subjugated kingdoms, and her vanquished empires! The Assyrian empire was not so wealthy; the Roman empire was not so populous; the Persian empire was not so extensive; the Arabian empire was not so powerful; the Carthaginian empire was not so much dreaded; the Spanish empire was not so widely diffused. We have overrun a greater extent of country than Attila, that scourge of God, ever ruled; we have subdued more empires, and dethroned more kings than Alexander of Macedon; we have conquered more nations than Napoleon in the plenitude of his power ever subdued; we have acquired a larger extent of territory than Tamerlane the Tartar ever spurred his horse's hoof across!" This is indeed a proud boast, and should stimulate us to good actions.

Bronchitis, Certain Cure for.—Many remedies have been advanced for

the cure of this distressing and serious disease, but we know of none so safe and certain as the following simple recipe: Half a teaspoonful of common saltpetre dissolved in a wine-glass of water, and used as a gargle, will be found a most effectual remedy. Or, a small piece of the saltpetre may be sucked as a *bon-bon*, and swallowed as it dissolves in the mouth. This remedy, not commonly used, has never been known to fail where tried, either with young or old; and as it is cheap and innocent, it should have a fair trial from every one that is attacked. Common saltpetre is to be had at any oil shop, and one halfpenny-worth is sufficient to cure any individual. While there is such a simple remedy at hand, it will be needless to give others of a less certain nature.

Brooches, Silver, To Clean.—Boil them in soap and water for five minutes, then put them in a basin with the same hot water, and scrub gently with a brush, now and then rinsing them, and wipe dry with a linen rag. In the meanwhile, heat a piece of commonest unglazed earthenware, or a portion of brick or tile, in the fire, and place the silver ornaments upon it, that they may dry well. Another mode is to leave the ornaments for three or four minutes in sal volatile.

Bubble and Squeak.—Cut into pieces convenient for frying, cold roast or boiled beef, add salt and pepper, and fry them. When done, lay them on a hot drainer, and while the meat is draining from the fat used in frying them, take a cabbage boiled in two waters, chop it small, and put it into the pan with some butter; add pepper, and keep stirring, that all of it may be equally done. When taken from the fire, sprinkle a little vinegar over the cabbage—just enough to give it a slight acid taste. Place the cabbage in the centre of the dish, and arrange the slices of meat around.

Buns, Bath.—Rub six ounces, or, if less richness be required, a quarter of a pound, of butter into a pound and a half of flour, adding a pinch of salt. Mix half a pint of milk, *warm*, with half an ounce of German yeast; strain, and pour it into the middle of the flour; cover, and set it before the fire to rise; when sufficiently risen, add a quarter of a pound of crushed loaf sugar, half an ounce of carraway seeds picked and washed, four eggs well beaten, and an ounce and a half of candied citron cut in thin slices. Make up the buns, lay them on baking tins, and let them rise for about a quarter of an hour. Bake in a quick oven; when done, brush them over with beaten egg, and sift sugar on them; also, if preferred, strew a few comfits on the top.

Buns, Plain.—Weigh two pounds of flour, and set sponge with half of it, three tablespoonfuls of yeast, and half a pint of warm milk. Cover it over, and in about an hour, or when it has risen, add a quarter of a pound of sugar, the same of butter, warmed, and the remainder of the flour, with warm milk enough to make a light dough. Let it rise an hour, then work it into cakes or buns; place them on a buttered tin to rise, and bake them in a brisk oven about ten minutes; when done, brush them over with milk and sugar. Spice may be added to the above.

Business, Rules for Success in.—*Select the kind of business that suits your natural inclination and temperament.*—Some men are naturally mechanics; others have a strong aversion to anything like machinery; and so on. One man has a natural taste for one occupation in life, and another for another. "I never could succeed as a merchant," says one; "I have tried it, unsuccessfully, several times." "I never could be content with a fixed salary," says another, "for mine is a purely speculative disposition, while others are just the reverse;" and therefore all should be careful to select those occupations that suit them best.

Let your pledged word ever be sacred.—Never promise to do a thing without performing it with the most rigid promptness. Nothing is more valuable to a man in business than the name of always doing as he agrees, and that to the moment. A strict adherence to this rule gives a man the command of half the spare funds within the range of his

acquaintance, and encircles him with a host of friends, who may be depended upon in any emergency.

Whatever you do, do with all your might.—Work at it, if necessary, early and late, in season and out of season; not leaving a stone unturned, and never deferring for a moment that which can just as well be done *now*. The old proverb is full of truth and meaning: "Whatever is worth doing is worth doing well." Many a man acquires a fortune by doing his business *thoroughly*, while his neighbour remains poor for life because he only *half* does his business. Ambition, energy, industry, and perseverance are indispensable requisites for success in business.

Sobriety.—As no man can succeed in business unless he has a *brain*, to enable him to lay his plans, and *reason* to guide him in their execution, so, no matter how bountifully a man may be blessed with intelligence, if his brain be muddled and his judgment warped by intoxicating drinks, it is impossible for him to carry on business successfully. How many good opportunities have passed never to return, while a man was sipping a "social glass" with a friend! How many a foolish bargain has been made under the influence of the wine cup, which temporarily makes its victim so rich! How many important chances have been put off until to-morrow, and thence for ever, because indulgence has thrown the system into a state of lassitude, neutralising the energies so essential to success in business.

Let hope predominate, but be not too visionary.—Many persons are always kept poor, because they are too *visionary*. Every project looks to them like certain success, and therefore they keep changing from one business to another, always in "hot water" and always "under the harrow." The plan of "counting the chickens before they are hatched" is an error of ancient date, but it does not seem to improve by age.

Do not scatter your powers.—Engage in one kind of business only, and stick to it faithfully until you succeed, or until you conclude to abandon it. A constant hammering on one nail will generally drive it home at last, so that it can be clinched. When a man's undivided attention is centred on one object, his mind will continually be suggesting improvements of value, which would escape him if his brain were occupied by a dozen different subjects at once. Many a fortune has slipped through men's fingers by their engaging in too many occupations at once.

Engage proper employés.—Never employ a man of bad habits when one whose habits are good can be found to fill his situation. Have faithful and competent persons to fill the responsible situations in your business. When you find a man unfit to fill his station, either from incapacity or peculiarity of character or disposition, dispense with his services, and do not drag out a miserable existence in the vain attempt to change his nature. It is utterly impossible to do so. Such a person has been created for some other sphere; let him find and fill it.

Be systematic in everything.—Let it extend to the very minutest trifles; it is not beneath you. Whitfield could not go to sleep at night, if, after retiring, he remembered that his gloves and riding-whip were not in their usual place, where he could lay his hands on them in the dark, on any emergency; and such are the men who leave their mark for good in the world's history. It was by his systematic habits, from youth to age, that Noah Webster was able to leave the world his great dictionary. "Method was the presiding spirit of his life," writes his biographer.

Systematic men are the only reliable men; they are the men who comply with their engagements. They are minute men. The man who has nothing to do is the man who does nothing. The man of system is soon known to do all that he engages to do; to do it well, and to do it at the time promised; consequently he has his hands full.

Butter, Substitute for.—A famous housekeeper recommends the following economical plan for making cake without butter:—Take a piece of fat salt pork, melt it down, and strain it through a piece of coarse, thin muslin. Set it aside until cold. It is then white,

and firm, and may be used like butter in any kind of cake. In pound cake, our authority assures us, it is delicious. After one trial she never used butter.—(See *Adulterations.*)

Butter, To Cure.—The following process adopted by the farmers of Scotland is highly approved. Dr. Anderson says, "I have eaten butter cured after this fashion that has been kept for three years, and it was as sweet as at first." Here is the method:—Take two quarts of the best common salt, one ounce of sugar, and one ounce of common saltpetre; take one ounce of this composition for one pound of butter, work it well into the mass, and close it well up till wanted for use. The butter cured with this mixture appears of a rich and marrowy consistence and fine colour, and never acquires a brittle hardness nor tastes salty. It must be noted, however, that butter thus cured requires to stand three weeks or a month before it is used. If it be sooner opened, the salts are not sufficiently blended with it, and sometimes the coolness of the nitre will be perceived, which totally disappears afterwards.

Buzz, Game of.—We will at once order the company to "fall in!" like a squad of volunteers, in single file, or, if they prefer it, they may take seats round the room; and this, we are inclined to think, will be the most sensible way of acting. That being accomplished, we give the order to "number off from the right!" and this must be done in true military style, except that for every *seven*, and each multiple of that number, the word "buzz" will have to be substituted. Let us give an example. The company must number off thus:—1, 2, 3, 4, 5, 6, buzz; 8, 9, 10, 11, 12, 13, buzz; 15, 16, 17, 18, 19, 20, buzz; and so on until an error is made, and then the game is recommenced. Should the company succeed in reaching 70, "buzz, buzz" must be used; and for 77 "buzz, buzz, buzz." A forfeit is paid for each mistake, to be redeemed when the game is over.

Cake, A Good Dough.—Take a quartern of baker's dough, knead well into it two ounces each of butter and brown sugar, half a pound of grocer's currants carefully cleaned, and a teacupful of thick cream; bake it in a buttered shape for half an hour or more, according to the heat of the oven. Carraway seeds may take the place of the currants, and the cake may be rendered richer by an increased quantity of sugar, butter, &c. *Or*—Take three pounds of dough, one pound of butter, one pound of sugar, one pound of currants, six eggs, one glass of brandy, one nutmeg, half a teaspoonful of allspice. Work the butter, sugar, and eggs well together, then work it into the risen dough, adding the spice and currants well picked and washed. Make it into a loaf, and bake the same as bread.

Cake, for Children.—Rub a quarter of a pound of butter, or good, clean fresh beef dripping, into two pounds of flour; add half a pound of crushed sugar, one pound of currants, well washed and *dried*, half an ounce of carraway seeds, a quarter of an ounce of pudding-spice or allspice, and mix all thoroughly. Make warm a pint of new milk, but do not let it get *hot;* stir into it three tablespoonfuls of good yeast, and with this liquid make up your dough lightly, and knead it well. Line your cake-tins with buttered paper, and put in the dough; let it remain in a warm place to rise for an hour and a quarter, or more, if necessary, and then bake in a well-heated oven. This quantity will make *two* moderately-sized cakes; thus divided, they will take from an hour and a half to two hours baking. N.B.—Let the paper inside your tins be about six inches higher than the top of the tin itself.

Cake, Raised, Without Eggs.—Stir together a large coffee-cupful of light brown or white sugar, and half a cupful of butter; add to it half a pint of sweet milk and half a pint of warm water. To this mixture stir in flour enough to make a thick batter, and half a cupful of yeast; set it to rise over night. Next morning stir in a cupful of chopped raisins or currants, and a teaspoonful each of cinnamon, cloves, and nutmeg. Put it into two baking pans; let it rise until perfectly light, then bake three quarters of an hour.

Calendar Months.

	Days.		Days.
January	... 31	July ...	... 31
February	... 28	August	... 31
March	... 31	September	... 30
April ...	... 30	October	... 31
May ...	... 31	November	... 30
June ...	... 30	December	... 31

February has 29 days in Leap Year.

Thirty days have September,
April, June, and November;
February has twenty-eight alone;
All the rest have thirty-one;
But Leap Year coming once in four,
Gives February one day more.

Leap Year is found by dividing the date of the year by four. If there be no remainder, it is Leap Year; but if there be any remainder, it shows how many years it is after Leap Year.

Calf's Head, To Boil.—With many epicures this is a very favourite dish. Split the head in two parts, and remove the brains. Wash the brains in three waters, and lay them for an hour in cold salt water. Wash the head clean, and soak it in tepid water until the blood is well drawn out. Put it in cold water; when it boils, remove the scum, and simmer gently until done. A head, with the skin, will take three hours if large, and without the skin, two. Scald the brains by pouring over them boiling water; then take them out and remove the skin, or film, put them in plenty of cold water, and simmer gently fifteen minutes. Chop them slightly, stew them in sweet butter and a teaspoonful and a half of lemon juice, or not, as desired, and a little salt. When done, skin the tongue, lay it in the centre of the dish, and the brains round it. Send the head to the table very hot, with melted butter poured over it, and more in the tureen.

Camellias, in Windows.—The camellia is one of the best plants for windows, as it is always beautiful, and may be easily managed so as to blossom abundantly every season.

In the first place, to manage the camellia well in a sitting-room consists in doing nothing more than is really needful. If people begin shifting their plants into larger pots, or using powerful stimulants, there will probably be some disaster or disappointment following. A novice in plant growing must confine his attention first to the keeping of the plant alive and in health, always remembering that the least likely thing to happen is the roots getting pot-bound. We have kept camellias measuring five and six feet high, and nearly as many feet through, in perfect health and vigour for years, in pots of from eleven to fifteen inches in diameter; and a very large plant may be grown in a five or six-inch pot—large enough, indeed, for all ordinary purposes of window decoration. Suppose we have now some nice camellias, in what are known as 48 and 32-sized pots. These plants have probably half a dozen to a dozen flower-buds each, and those buds are swelling with the warmth of the room. Now, the worst to be apprehended at present is the falling of the flower-buds. This may happen through any of the following causes—

Too dry and too hot an atmosphere; want of water at the roots; too much water at the roots; water given *too cold* at the roots; sudden change of temperature; want of daylight; exposure to high temperatures at night.

We will now state the means of preventing the falling of the buds—

Water as often as the roots are nearly dry. The water to be of the same temperature as the room. The leaves to be sponged frequently with tepid water. Plants to be removed when the room is extra heated, especially at night. Never to be exposed to cold draughts; on the other hand, to be set out on a balcony, in the sun, on bright, warm days.

As the buds swell, the roots may be watered, once a week, with a solution of sulphate of ammonia—half an ounce to a gallon of water—or two or three drops of hartshorn may be put in the water every time the plant is watered.

If the pots stand in saucers, these must be emptied of all drainings from the pots after watering.

It may seem to some that there is a great deal to learn in order to make sure of keeping a pet plant. In plain truth, the chief thing is to observe *regularity* in attending to window plants. It is the doing too much to-day and forgetting them to-morrow that kills most of the

plants that are taken into rooms. Let it be remembered that the camellia likes a moist atmosphere, and that the air of dwelling-rooms is generally dry, and it will be seen how important it is that the leaves should be sponged frequently, to keep them clean, and to benefit the plant by the moisture the leaves will absorb during the process. Camellias ought never to be dry at the root, especially in winter. Drought does not hurt them so much in summer as in winter, and the cultivator of camellias in windows should endeavour to keep the roots always moist, but not wet, and with no stagnant water under the pots.

Treated according to these rules, the plants will flower well, and then they begin to grow. Winter is the critical time for camellias in rooms, because then they require an atmosphere extra moist, still, and warm; and if they can be placed in a warm pit or shady greenhouse, to make their new growth, it will be the better for them. Supposing that cannot be done, we should advise the cultivator—

To remove all the flowers as soon as the new plants have made a start.

To dew the plants twice a day, by drawing the hand over a wet brush held close beside them.

To water the roots regularly, as before advised, but to use no stimulants.

To nip out the top bud of every shoot, and allow all other buds to grow as they please.

To keep the plants in full daylight, but not to place them in the sun.

To give them very little air.

Not to sponge the new leaves till they are quite firm in texture.

To cut away any ugly shoot which may have been preserved hitherto because it had flower-buds on it.

To scrape away a little of the top soil without hurting the roots, and replace it with a mixture of half leaf mould and half dung, rotted to powder.

With this treatment the plants will, in due time, cease to grow, and at the termination of every new shoot there will be a flower-bud formed. As soon as this terminal bud is visible, begin to give the plants air by degrees, and let them feel the sun morning and evening. Cease to dew the foliage and give less water, but do not let them go quite dry at the roots. After a fortnight of this treatment, place them out of doors, in a warm, sheltered, and rather shady place; and all the attention they will want till October following will be to water them regularly. A little sun will do them good, but to be exposed to the full sun in the height of summer will be hurtful. These plants grow naturally in damp, shady woods, and thus they require less light than many other equally showy subjects, and that is the reason they do so well in old-fashioned greenhouses, which have high walls and heavy roofs. The object of nipping out the top buds is to keep the plants dwarf and bushy. If the top buds are allowed to grow, the plants become in a few years very leggy and unsightly.

Canaries, Treatment of.—These little favourites of the feathered tribe are natives of the Canary Islands, where they abound in great numbers; they were introduced into Europe as early as the fourteenth century. Italy was the first European country where the canary was reared. The grey of its primitive colour, darker on the back and greener on the belly, has undergone so many changes, from its being domesticated, from the climate, and from union with birds analogous to it, that now we have canaries of all colours. The grey, the yellow, the white, the blackish, and the chestnut, are the principal varieties, and it is from their combination, and from their tints, that we derive the numerous varieties we now have. Those canaries that have the upper part of the body of a dusky green, and the under part the yellowish green of the green bird, with dark brown eyes, are the strongest. The yellow and white often have red eyes, and are the most tender. The canary that is most admired amongst us now is one with the body white or yellow; the head, wings, and tail yellowish dun. The best time for pairing canaries is about the middle of April. Birds which are to be paired for the first time should be previously kept in the same cage for several days, in order to become acquainted with each other.

The pairing cage should be divided into two compartments, with communication between them by a sliding door, so that a separation may be effected when required. For nest-building purposes, the bottom of the cage or aviary should be strewed with straw, paper shavings, moss, wool, the hair of cows, rabbits, and hares, and other soft materials, and with which these untutored little mechanics will construct a soft, snug, elegant little dwelling for their offspring.

In this little abode of love the female generally lays about six eggs, on alternate days; and, in about thirteen days after laying the last egg, the young will make their appearance, each one as it succeeds the other gladdening the heart of the tender mother with new joys. As soon as the young ones are hatched, a portion of an egg boiled hard, and chopped very fine, yolk and white together, and mixed with fine crumbs of white bread, should be put into the cage, and in another vessel some rape-seed well boiled and washed in fresh water. This should be repeated often, and great care taken that the food be not allowed to remain in the cage till sour. Under all circumstances, in breeding, the cage should be commodious, so as to afford ample room for exercise. When about 14 days old, the young ones are able to feed alone. The males should then each be placed in a cage to himself, apart from the others, that his education may not be intercepted, if he is intended to undergo an education. If left together beyond that time, the young bird will mar the beauty of his own melody by acquiring his parents' notes. His education is best accomplished by frequently playing the air most desired to be sung on a bird-organ, but the whistling of a man of taste is far preferable. Many canaries have been taught to sing several airs quite correctly. A good education will require from three to six months, and must be carefully followed up.

There are some canary-keepers who, from mistaken kindness to their pets, give them rich sweet cake and other unsuitable food, which, though they eat it apparently with a relish, does them considerable injury, which may soon be discovered by their ceasing to sing with their usual gaiety. Great care should be taken to adapt their treatment in conformity with the season of the year. They require to be kept in rooms of an even temperature; if exposed to cold, either by draught or in the open air, they sicken and die. In summer weather they should be hung in the open air and in the sunshine. If they are kept in a very warm or hot room, they will moult before their proper time, which it is important to avoid. The cage, which should be furnished with three cross sticks, a glass for water on the outside, which should be replenished daily, must be kept clean, and a little fine sand scattered on the bottom of it. Beside seed they may frequently be supplied with a little green stuff, such as chickweed, endive, water-cress, lettuce, &c., in summer, and thin slices of sweet apple in winter. As they like to wash their feathers, a cup of clean water should be put into the cage frequently for that purpose; and if by the process they scatter a few drops on the table or carpet, they will repay you for the trouble of wiping it up by singing a fresh song to drive dull care away.

Candlemas Day.—This holiday in the English church falls on the 2nd of February. The early fathers of the church held it in commemoration of the attendance of Mary in the temple, forty days after childbirth, as commanded by the law; and it was their custom on this day to bless candles, and distribute them among the people, by whom they were carried in solemn procession. The saying of Simeon, respecting the infant Christ, in the temple, that he would be a *light* to lighten the Gentiles, probably supplied an excuse for adopting the candle-bearing procession of the heathen, whose external religious practices the founders of the Romish Church made a practice of imitating, in order to take advantage of habits of the people. Apparently in consequence of the celebration of Mary's purification by candle-bearing, it became customary for women to carry candles with them when, after childbirth, they went to be churched.

Candlesticks, Ornamental.—First, procure some cardboard, cut out

the candlestick, or any other ornament, make it the desired shape, then lay on some rice. Having prepared some spirits of wine and sealing-wax, which must be melted in a bottle before a fire (care being taken not to place it too near and to keep the bottle uncorked), lay it with a brush on the rice. When done they look exceedingly well, and may be taken for coral. A box need not be cut out of cardboard, as a common box answers quite as well.

Capillaire.—Put twelve pounds of loaf sugar and four of coarse, and five or six eggs, carefully beaten, into three quarts of water; boil it up twice, skim it well, then add a quarter of a pint of orange-flower water, strain it through a jelly bag, and put it into bottles for use; a spoonful or two of this syrup put into a draught of warm or cold water forms an agreeable beverage.

Carp.—By its frequency of spawning, and quickness of growth, carp is a fish that is greatly used to stock ponds, where it thrives better and lives longer than in rivers. Gesner speaks of one who lived to one hundred years old; there is much doubt about its general age, but it is supposed to be a very long-lived fish. They spawn three or four times a year, but the earliest time is about the commencement of May. They are observed to live uncommonly long out of water, and in Holland are frequently kept alive for three weeks or a month in a cool place, by being hung with wet moss in a net, and fed with bread steeped in milk. In angling for carp it is necessary to make use of strong tackle, with a fine gut near the hook, and the float formed of the quill of a goose. They bite almost close to the bottom, and are rarely caught if angled for in a boat. From its subtlety it has been sometimes called the "water fox." The river carp is accustomed to haunt in the winter the most quiet and broad parts of the stream. In summer they live in deep holes, reaches, and nooks, under the roots of trees, and among great banks of weeds until they are in a rotten condition. The pond carp loves a rich and fat soil, and will seldom or never thrive in cold, hungry waters. The carp-ponds of Germany yield a considerable income to the gentry.

Carpets, to Scour.—The following instructions apply to all kinds of carpets—English, Brussels, Persian, and Turkey. Some few years since Mr. Thomas Love, a practical dyer, published a very valuable manual on the subject of renovating carpets, from which we extract the following:—

"Have them (the carpets) taken up and well beaten, brushed, laid flat on the floor, and the spots taken out by rubbing a piece of hard soap on the greasy spot, and rubbing it out with a brush and clean cold water, well drying each spot as it is done with a cloth before you leave it. Cut a bar of the best mottled soap into two gallons of water, and put it on the fire to dissolve, and when dissolved, begin and scour the carpet in the manner following: Take two pails of blood-warm water, and put in one of them two quarts of the melted soap to scour the carpet with, and the other pail of warm water is to rinse the soap and dirt out of the carpet as you go on with the cleaning, which must be done at less than one square yard at a time. Now dip a brush into the pail with the soap in it, and lift it out on the carpet, and scour about a square yard at a time, while on the knees, and do it so as not to let it go through to the back of the carpet; when this spot or yard is cleaned well with soap and a brush, rub the soap well out by means of a flannel or coarse sponge, and suck up in the sponge or flannel the wet and dirt that was made on the carpet by the scouring-brush, by rinsing the flannel in a pail of clean water repeatedly. Have a pail of clean cold water and a little common sour in it, and have a clean sponge and dip it in the sour, squeeze it well, kneel down and rub the sponge well into the spot you have first cleaned and rinsed. Now this spot must be dried with clean coarse cotton or linen cloth, before you leave it as properly done, and before you proceed with another yard of the carpet. Cleaning carpets dry exemplifies the old saying and the true one, 'You should rub off as you go.' And so you must go on, square after square yard, until the carpet is entirely cleaned.

A good fire ought to be in the room to help to dry it on the floor as fast as it is done. The floor must be kept clean and dry before you begin to scour the carpet, and the carpet beat and laid down.

"What we mean by dry-cleaning a carpet or hearth-rug is, that we do not leave it until it is nearly dry. There is nothing so good as liquid soap and water, or so gentle for the colours, as it is good for the wool and the colours if no alkali is used with it. Next to soap, gall may be recommended for the purpose."

Carriages, Duties on.—

For every carriage with four wheels, weighing 4 cwt. ...	2	2	0
For every carriage with less than four wheels, or if four, under 4 cwt.	0	15	0

Cat's Whiskers, Use of.—The whiskers on a cat's upper lip are very important. They are organs of touch. They are attached to a bed of close glands under the skin, and each of these long hairs is connected with the nerve of the lip. The slightest contact of these whiskers with any surrounding object is thus felt most distinctly by the animal, although the hairs of themselves are insensible. They stand out on each side of the lion as well as in the common cat, so that, from point to point, they are equal to the width of the animal's body. If we imagine, therefore, a lion stealing through a cover of wood, in an imperfect light, we shall see at once the use of the long hairs. They indicate to him, through the nicest feeling, any obstacle which may present itself to the passage of his body; they prevent the rustle of boughs and leaves, which would give warning to his prey if he were to attempt to pass through too close a bush; and thus, in conjunction with the soft cushions of his feet, and the fur upon which he treads (the retractable claws never come in contact with the ground), they enable him to move towards his victim with a stillness even greater than that of the snake, who creeps along the grass and is not perceived until he is coiled around his prey.

Cayenne.—See *Adulterations.*

Cement Cheese.—This cement is a very safe and durable one for uniting china and earthenware, and is thus prepared:—Take some fresh cheese and pound it, and then wash all the soluble matter from it, but use warm water. After this thoroughly strain, and it will then crumble. By drying it upon blotting paper it may be preserved for an indefinite period. For use, some of the cheese is mixed with a little quicklime, which at once imparts an adhesive quality to it, and by the aid of warm water it may be brought to a proper consistence. When ready for use it should be applied immediately, for it quickly dries, and cannot be melted a second time. The proportions are about half an ounce of quicklime to one ounce of grated cheese, with the addition of as much white of egg as may be necessary, the whole beaten into a paste.

Cement, A New.—M. Sorrel has communicated to the Academy of Science a new cement, being a basic hydrated oxychloride of magnesium. It may be obtained by slaking magnesia with a solution of chloride of magnesium in a more or less concentrated state. The denser the solution, the harder it becomes on drying. This cement is the whitest and hardest of all those known to this day, and it can be moulded like plaster, in which case the cast acquires the hardness of marble. It will take any colour, and has been used by the inventor for mosaics, imitations of ivory, billiard balls, &c. The new cement possesses the agglutinative property in the highest degree, so that solid masses may be made with it, at a very low cost, by mixing it up on a large scale with substances of little value. One part of magnesia may be incorporated with upwards of twenty parts of sand, limestone, and other inert substances, so as to form hard blocks; while lime and other cements will hardly admit of the incorporation of two or three times their weight of extraneous matter. By means of these artificial blocks, building may easily be carried on in places where materials for the purpose are scarce. All that is required is simply to convey a quantity of magnesia and chloride of magnesium to the spot, if there be none to be had there, and then to mix them up with sand,

pebbles, or any other matter of the kind close at hand; blocks imitating hewn stone, can then be made of any shape, This magnesian cement may be obtained at a very low cost, especially if the magnesia be extracted from the mother-ley of salt works, either by M. Balard's process, whereby magnesia and hydrochloric acid are obtained at the same time, or else by decomposing the ley, which always contains a large proportion of chloride of magnesium, by means of quicklime, which, by double decomposition, yields magnesia and chloride of lime containing a certain quantity of chloride of magnesium, and which, with the addition of various other cheap substances, may be used for whitewashing.

Cement, New and Useful.—On the authority of Professor Boettger, the following cement, which admits of being coloured, and which hardens with considerable rapidity, will be found very useful:—If finely powdered chalk is stirred into a solution of water-glass (silicate of soda) of 33° until the mixture becomes thick and plastic, a cement is obtained which will harden in between six and eight hours, possessing great durability, and applicable for domestic or industrial purposes. Any colour desired can be obtained by uniting any of the coloured metallic oxides or sulphides with this composition.

Chairs and Sofas, Leather, To Restore.—The black leather work of chairs and sofas may be restored by first well washing off the dirt with a little warm water and soap, and afterwards with clean water. The faded portions may now be re-stained by means of a little black ink, or preferably, black reviver, and when this has got thoroughly dry, they may be touched over with white of egg, strained and mixed with a little sugar-candy. When the latter is nearly dry, it should be polished off with a clean, dry brush.

Character. — Everything that belongs to humanity is capable of yielding hidden meanings to any one who will bring a penetrating eye, and an interpreting mind to the study. No man can wear a hat or a pair of slippers for a month or two, without putting some of his individuality into his garments. "The apparel oft proclaims the man." You may gain plenty of hints concerning character by looking keenly at a man's surroundings—the quality and arrangement of his furniture, books, pictures, or ornaments. Without even going into a house, you may often give a shrewd guess at the character of the inmates by a rapid glance at the windows, garden, fences, walls, &c. There is an expression in the way in which anyone shakes hands with his friend; in the style in which a smoker holds a pipe or cigar, or puffs out its fumes; in the mode in which a pedestrian wields his stick or umbrella; in the manner of taking food, playing musical instruments, or singing songs. Some secret may be let out by the attitude a man takes when he is talking in a parlour or shop, the chair he selects, and the mode in which he sits upon it. The tones of the voice are full of meaning; the selection of phrases, the structure of sentences, everything that a person does, almost everything that he touches, may bear the stamp of his individuality.

Cheese, Artificial.—Well pound some nutmeg, mace, and cinnamon; to which add a gallon of milk and two quarts of cream; boil these in the milk; put in eight eggs, six or eight spoonfuls of wine vinegar to turn the milk; let it boil till it comes to a curd, tie it up in a cheese cloth, and let it hang six or eight hours to drain, then open it, take out the spice, sweeten it with sugar and rose-water, put it into a colander, let it stand an hour more, then turn it out, and serve it up in a dish, with cream under it.

Cheese, Varieties of.—Cheese is made by first warming the milk, and then curdling with rennet, which is a substance procured from the stomach of a sucking calf, and is the natural juice intended to divide the curd from the whey, for its nourishment. All milk consists of three different substances—the oil or *butter*, the *whey* (which is a thin fluid), and the *curd* (which is the solid part).

After the curd has been sufficiently formed in the milk, it is well stirred and broken with the hand, and is then collected on a coarse cloth, and put into a

shape, made by a wooden hoop held together by a string passed round, so that it can be easily removed. When the cheese has begun to harden, a round board is placed on the top of the cheese, and then subjected to heavy pressure. After being repeatedly turned in the press, and having salt rubbed on it to prevent fermentation, it is placed on a shelf to dry, and when dried, it is ready for sale.

The most esteemed and most popular varieties of cheese are those called Cheshire and Gloucester; while ripe Stilton is the epicure's favourite, and the most expensive. It is made in Leicestershire, and requires much care to keep it good and sweet till fit for eating. When perfectly ripe, green mould appears in it. At one time it was a secret how it was made, but is now commonly known. The cream of the preceding evening's milk is added to the new morning's milking, with a due quantity of rennet. The curd is not broken in the manner of making other cheese, but carefully taken out and placed in a sieve, gradually to drain.

The other varieties are, cream cheese, Cheddar, Dutch, and Parmesan. The latter comes from Parma, and is made from skimmed milk, and its coagulation is effected in a cauldron hung over a fire. Dutch cheese is also made of skimmed milk, and the curd is carefully washed and soaked in salt and water before it is pressed into the mould, which, while it injures the flavour, gives the cheese the desirable quality of keeping sweet, and makes it independent of climate.

Chess.—As to the ascertaining of who it was that first introduced the game, that is out of the question altogether. The Chinese profess to have known it two hundred years previous to our era; and a curious anecdote has been handed down to us relative to its first introduction into that country. It is styled a "Wonderful Calculation," and is as follows: "When the game of chess was first invented, the Emperor of China sent for the inventor, and desired him to teach it him. The emperor was so delighted with the game, that he told the inventor whatever he should demand should be given him as a remuneration for his discovery. To which he replied that if his majesty would but give him a grain of corn for the first square of the chess-board, and keep doubling it every check until he arrived at the end, he would be satisfied. At first the emperor was astonished at what he thought the man's modesty, and instantly ordered his request to be granted. The following is the sum total of the number of grains of corn, and also the number of times they would reach round the world, which is 360 degrees, each being 69½ miles—18,446,743,573,783,086,315 grains, or 3,883,401,821 times round the world."

The game affords so much variety, so much scope for calculation, so many opportunities for forethought and penetration, that no wonder it has been held in great esteem by all nations acquainted with it and persons who have conquered the difficulties of learning it. In brief, chess affords enjoyment worthy of all observant minds.

Introduction to the Game of Chess.—On the next page will be found the chess-board, duly set out with all the chessmen in order to begin the game.

The king and queen occupy the centre squares of the first line, and each is supported by a bishop, a knight, and a castle, while in front of these stand the eight pawns. The pieces on the king's side are called the king's: as the king's bishop, the king's knight, the king's castle. The pieces on the queen's side are called in the same manner: as queen's bishop, &c.

The chess-board must be so placed that each party has a white corner square nearest his right hand. Each party, it is seen, has two ranks of men. On the first stand the pieces, and on the next the pawns; to be more explicit—

The player of the black has—

A black king ... ...

A black queen ... ...

Two black bishops ... ...

Two black knights ... ...

Two black castles or rooks ...

And eight black pawns... ...

And the player of the white has—

A white king ... ...

A white queen ... ...

Two white bishops ... ...

Two white knights ... ...

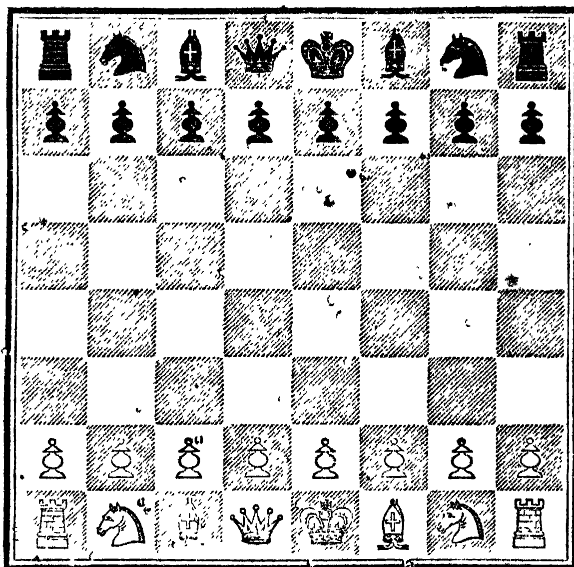
Two white castles or rooks ...

And eight white pawns... ...

THE RELATIVE VALUE OF THE CHESS FORCES.

The King.—As the king can neither be exchanged nor captured, his relative

BLACK.



WHITE.

value with the other pieces cannot really be estimated.

The Queen.—The average value of the queen is considered equivalent to two rooks and a pawn.

A Rook.—A rook is estimated of the worth of a bishop and two pawns, or a knight and two pawns. Two rooks may be exchanged for three minor pieces.

A Bishop and a Knight.—These pieces, practically considered, are of equal value. Though the advantage, if there is any, is thought to be on the side of the former.

A Pawn stands lowest in the scale of powers, being usually calculated at about

one-third the value of a bishop or knight. Some of our best players, however, make great use of their pawns, and will, by judicious manœuvring and protection, win many a game by their aid; therefore, they are not to be despised and carelessly lost. They are, in fact, the advanced guard, or *private soldiers*, and their true value can only be estimated as the battle progresses. Examples of this will be presently given to you.

The next subject of importance is—

The Moves of the Pieces and Pawns.



The King.—This royal personage is the most important piece at Chess; the sole object of the game is to hem him in so that he cannot move without going into such a situation as would render him liable to be taken if he were not a king. He then is check-mated, and must surrender. He steps only from one square to the next at a time, but in any direction whatever, either forward, backward, sideways, or diagonally. He can also take any of the enemy's men in any square adjoining to him—such piece being unprotected—so that he does not thereby place himself in check; that is, in such a situation as, if he were not a king, he could be taken by the enemy. The king, however, is never actually taken; but if he be checked by one piece, and cannot move into another square without being in check from another, he loses the game. Whenever the king is in check, the adversary should say "check" to him, which is warning either to defend himself by his other pieces, to take the man who assaults him, or to move into a place of safety.



The Queen.—Her majesty is by far the most powerful piece; she has the advantage of moving as a castle in straight lines, forward, backward, sideways, to the full extent of the board in all directions. She is also permitted to move like a bishop, diagonally to the same extent. By these powerful means she can travel from one end of the board to the other in one move, provided there are no other pieces in her way. The queen's move is that of the castle and bishop combined.



The Rook or Castle. — The rook or castle is next in importance to the queen. He moves in a straight line, either forward, backward, or sideways. He is allowed to move any number of squares, and may take the whole extent of the board in one move, providing the field be open. The power of this piece is seen to greater advantage at the end of a game.



The Bishop.—The bishop moves diagonally, forward or backward to the extent of the board in one move, as far as the squares are open. He travels throughout the game only on squares of the same colour as the one on which he stands at the commencement of the game, and each player has a bishop moving on the white squares, and one on the black squares.



The Knight. — The movements of the knight are very peculiar, by far the most complicated, and therefore not easy to describe. He is the only piece which has the privilege of leaping over another: for example, at the commencement of the game, the knight is the only one of the eight superior pieces which can be played before the pawns are moved. The knight's move is one square in a straight line, and one in an oblique direction. He may be placed in one corner of the board, and conveyed thence into every one of the other squares in sixty-three moves.



The Pawn.—Pawns are of great consequence in defending the king, and are very useful in attacking and repelling the pieces. The pawn moves only one square at a time (except at starting, when it can move two squares), and that straight forward, except in the act of capturing, when it takes one step diagonally to the right or left, occupying the square of the piece taken. A pawn is the only one of the forces that always goes out of its direction to capture, and which has not the advantage of moving backward. One remarkable privilege of the pawn is, that *whenever it reaches the extreme square of the board, it assumes the power of any superior piece, except the king, which the player chooses.*

THE CHESS BOARD NOTATED.

BLACK.

Q. R.'s sq. Q. R.'s 8th.	Q. Kt.'s sq. Q Kt.'s 8th	Q. B.'s sq. Q. B.'s 8th	Q.'s sq. Q.'s 8th	K.'s sq. K.'s 8th.	K. B.'s sq. K. B.'s 8th	K. Kt.'s sq. K. Kt's 8th	K. R.'s sq. K. R.'s 8th
Q. R.'s 2nd. Q. R.'s 7th	Q Kt.'s 2nd Q Kt.'s 7th	Q. B.'s 2nd Q. B.'s 7th	Q.'s 2nd. Q.'s 7th.	K.'s 2nd. K.'s 7th.	K. B.'s 2nd K. B.'s 7th	K. Kt.'s 2nd K. Kt's 7th	K. R.'s 2nd K. R.'s 7th
Q. R.'s 3rd. Q. R.'s 6th	Q. Kt.'s 3rd Q Kt.'s 6th	Q. B.'s 3rd Q. B.'s 6th	Q.'s 3rd. Q.'s 6th.	K.'s 3rd K.'s 6th.	K. B.'s 3rd K. B.'s 6th	K. Kt.'s 3rd K. Kt's 6th	K. R.'s 3rd K. R.'s 6th
Q. R.'s 4th. Q. R.'s 5th	Q. Kt.'s 4th Q Kt.'s 5th	Q. B.'s 4th Q. B.'s 5th	Q.'s 4th. Q.'s 5th	K.'s 4th. K.'s 5th.	K. B.'s 4th K. B.'s 5th	K. Kt.'s 4th K. Kt's 5th	K. R.'s 4th K. R.'s 5th
Q. R.'s 5th. Q. R.'s 4th.	Q Kt.'s 5th Q Kt.'s 4th	Q. B.'s 5th Q. B.'s 4th	Q.'s 5th. Q.'s 4th	K.'s 5th. K.'s 4th.	K. B.'s 5th K. B.'s 4th	K. Kt.'s 5th K. Kt's 4th	K. R.'s 5th K. R.'s 4th
Q. R.'s 6th. Q. R.'s 3rd.	Q Kt.'s 6th Q Kt.'s 3rd	Q. B.'s 6th Q. B.'s 3rd	Q.'s 6th Q.'s 3rd.	K.'s 6th. K.'s 3rd.	K. B.'s 6th K. B.'s 3rd	K. Kt.'s 6th K. Kt's 3rd	K. R.'s 6th K. R.'s 3rd
Q. R.'s 7th. Q. R.'s 2nd.	Q. Kt.'s 7th Q. Kt.'s 2nd	Q. B.'s 7th Q. B.'s 2nd	Q.'s 7th. Q.'s 2nd.	K.'s 7th. K.'s 2nd.	K. B.'s 7th K. B.'s 2nd	K. Kt.'s 7th K. Kt's 2nd	K. R.'s 7th K. R.'s 2nd
Q. R.'s 8th. Q. R.'s sq.	Q. Kt.'s 8th Q. Kt.'s sq.	Q. B.'s 8th Q. B.'s sq.	Q.'s 8th. Q.'s sq.	K.'s 8th. K.'s sq.	K. B.'s 8th K. B.'s sq.	K. Kt.'s 8th K. Kt.'s sq.	K. R.'s 8th K. R.'s sq.

WHITE.

The preceding diagram represents Chess Notation, which it is most important for the student to commit to memory:—Each of the *sixty-four squares* has a name—as "King's square 5th," "Queen's square 8th," "King's knight's 3rd," "Queen's bishop's 6th," and so on, just as they are there notated.

TECHNICALITIES OF CHESS.

Check and *Check-mate*.—When the king is attacked by any piece or pawn, he is said to be in *check*: it being a principle of the game that the king can never be taken; whenever any direct attack is made upon him, the player must be warned of his danger by the cry of "*Check*," whereupon he is compelled to do one of three things: viz., to remove his king out of check, parry the danger by interposing a man between his king and the attacking piece, or capture the checking man. When the king can do none of these three things, he is check-mated, and the game is won by the other side. If the king is *directly* attacked by the enemy, it is called a simple *check*; when the piece or pawn moved does not itself attack the king, but unmasks another which does, it is called a *discovered* check; and when both the piece played and the one unmasked attack the king, they are said to give *double check*. There is also a fourth description of check, known as *perpetual check*, which arises when a player has two or more squares on which he can check the adverse king, and his opponent can only parry one check by affording an opportunity of another. If the checking player choose to persist in the repetition of these particular checks, the game must be abandoned as drawn.

Stale-mate.—When a player has his king so circumstanced that, not being at the moment in check, he cannot move him without putting him in check, and at the same time has no other piece or pawn to move instead, he is said to be "stale-mated," and the game must be relinquished as a drawn battle.

Drawn Games.—In addition to the instances just cited, where the game is drawn by *perpetual check*, or *stale-mate*, a drawn game may arise from neither party having sufficient force left to effect a check-mate, as a king and a knight only, or a king and two knights, &c. The game is considered drawn, too, when one party, having sufficient force left, is ignorant of the proper way to apply it, and fails to check-mate his helpless opponent within the fifty moves prescribed by the 22nd law (*see* page 62). It is drawn also where both persist in repeating the same move from fear of each other, or where they are left at the end with an equal force, as a king and queen against a king and queen, or king and rook against a king and rook; except in peculiar cases.

Smothered or Stifled Mate.—A check-mate which is occasionally given by the knight when the adverse king is hemmed in or stifled by his own forces.

Fool's Mate.—The simplest and speediest of all check-mates, being effected in two moves, thus:—

WHITE.

1. P to K Kt's 4th.
2. P to K B's 4th.

BLACK.

1. P to K's 4th.
2. Q to K R's 5th. Check-mate.

Scholar's Mate is a check-mate occasionally given at the outset of a game, to an inexperienced player, thus:—

WHITE.

1. P to K's 4th.
2. K B to Q B's 4th.
3. Q to K R's 5th.
4. Q takes K B's P. Check-mate.

BLACK.

1. P to K's 4th.
2. K B to Q B's 4th.
3. P to Q's 3rd.

Gambit is derived from an Italian phrase in wrestling, and signifies a feint by which the adversary is tripped up. In chess it is used to designate those openings in which a pawn is sacrificed at the beginning, for the purpose of leading the enemy into difficulties. The most important gambit, and one which includes several others, is called the king's gambit, begun as follows:—

WHITE.

1. P to K's 4th.
2. P to K B's 4th.

BLACK.

1. P to K's 4th.
2. P takes P

The pawn thus offered for capture by white is called the gambit pawn, and when it is taken by the adversary, the opening becomes a gambit.

Taking a Pawn en passant, or in passing.—This is a privilege which a pawn has of taking an adverse pawn which passes it by making two steps on the first move.

Queening a Pawn.—When a pawn has reached the eighth square of the file, it assumes the power of a queen, or any other superior piece which the player chooses. This is called "queening a pawn."

Passed Pawn.—A pawn which cannot be obstructed in its march by an adverse pawn is said to be a "passed pawn."

Doubled Pawn.—When two or more pawns belonging to the same player are on the same file, the foremost one is termed a "doubled pawn."

Isolated Pawn.—A pawn which stands alone, without support and protection from its brother pawns, is called an "isolated pawn."

Marked Pawn is a peculiar game, in which one party undertakes to place a cap or ring on one of his pawns, and to check-mate his adversary with that identical pawn.

En Prise.—When a piece or pawn is in a situation to be taken by the enemy, it is said to be *en prise*.

Forced Move.—Where a player has one legal move only at his command, it is called a "forced move."

False Move.—An illegal move, such as playing a rook diagonally, a bishop like a knight, or castling when the king is in check, or after he has been moved, is termed a "false move."

The Exchange.—If a player contrive to gain a rook for a bishop, or a knight, he is said to have "won the exchange."

Minor Pieces.—The bishop and knight, in contradistinction to the queen and rook, are described as "minor pieces."

The Opposition.—A player is said to gain the "opposition" when he has so manœuvred his king as to compel the adverse king to retreat or abandon the advantageous squares.

Party.—Derived from the French word, *partie*, and occasionally used instead of "game."

To Interpose.—When the king is checked, or any valuable piece attacked, the man placed between to ward off danger is said to be "interposed."

J'adoube.—An old French expression, signifying "I adjust," or "I replace," used by a player when he touches a man merely to rectify its position, without intending to play it. (*See* law 7th.)

Rank and File.—The row of squares running from right to left are called "ranks," while those which run from player to player are termed "files."

Seizing the Open File.—When a player takes command of an unoccupied file of squares, by planting his queen or a rook at one end of it, it is customary to say that he "seizes the open file."

Our next consideration will be the Laws of Chess, which should be carefully studied, and, in fact, learnt by heart as quickly as possible; for until these are mastered, the student must not hope to become a proficient player.

THE LAWS OF CHESS.

The following laws, with some trifling variations, have been in general use for the last fifty years. A few years since they were revised by a Committee of the London Chess Club, established in 1807, and are now universally adopted by all the Chess Clubs of Great Britain.

1. The chess-board must be so placed that each player has a white corner square nearest his right hand. If the board have been improperly placed, it must be adjusted, provided *four* moves on each side have not been played, but not afterwards.

2. If a piece or pawn be misplaced at the beginning of the game, either player may insist upon the mistake being rectified if he discover it before playing his *fourth* move, but not afterwards.

3. Should the player, at the commencement of the game, omit to place all his men on the board, he may correct the omission before playing his *fourth* move, but not afterwards.

4. If a player, undertaking to give the odds of a piece or pawn, neglect to remove it from the board, his adversary, after *four* moves have been made on

each side, has the choice of proceeding or recommencing the game.

5. When no odds are given, the players must take the first move of each game alternately, drawing lots to determine who shall begin the first game. If a game be drawn, the player who began it has the first move of the following one.

6. The player who gives the odds has the right of moving first in each game, unless otherwise agreed. Whenever a pawn is given it is understood to be always the *King's Bishop's Pawn*.

7. A piece or pawn touched must be played, unless at the moment of touching it the player says "*J'adoube*," or words to that effect; *but if a piece or pawn be displaced or overturned by accident, it may be restored to its place.*

8. While a player holds the piece or pawn he has touched, he may play it to any other than the square where he took it from; but, having quitted it, he cannot recall the move.

9. Should a player take one of his adversary's pieces or pawns, without saying "*J'adoube*," or words to that effect, his adversary may compel him to take it; but if it cannot be legally taken, he may oblige him to move the king; should his king, however, be so posted that he cannot be legally moved, no penalty can be inflicted.

10. Should a player move one of his adversary's men, his antagonist has the option of compelling him—1st, to replace the piece or pawn and move his king; 2nd, to replace the piece or pawn and take it; 3rd, to let the piece or pawn remain on the square to which it had been played, as if the move were correct.

11. If a player take one of his adversary's men with one of his own that cannot take it without making a false move, his antagonist has the option of compelling him to take it with a piece or pawn that can legally take it, or to move his own piece or pawn which he touched.

12. Should a player take one of his own men with another, his adversary has the option of obliging him to move either.

13. If a player make a false move, *i. e.*, play a piece or pawn to any square to which it cannot legally be moved, his adversary has the choice of three penalties, viz., 1st, of compelling him to let the piece or pawn remain on the square to which he played it; 2nd, to move correctly to another square; 3rd, to replace the piece or pawn and move his king.

14. Should a player move out of his turn, his adversary may choose whether both moves shall remain, or the second be retracted.

15. When a pawn is first moved in the game, it may be played one or two squares; but in the latter case the opponent has the privilege of taking it *en passant* with any pawn which could have taken it had it been played one square only. A pawn cannot be taken *en passant* by a piece.

16. A player cannot castle in the following cases:—

1. If the king or rook have been moved.
2. If the king be in check.
3. If there be any piece between the king and the rook.
4. If the king pass over any square attacked by one of the adversary's pieces or pawns.

Should a player castle in any of the above cases, his adversary has the choice of three penalties—viz., 1st, of insisting that the move remain; 2nd, of compelling him to move the king; 3rd, of compelling him to move the rook.

17. If a player touch a piece or pawn that cannot be moved without leaving the king in check, he must replace the piece or pawn and move his king; but if the king cannot be moved, no penalty can be inflicted.

18. If a player attack the adverse king without saying "Check," his adversary is not obliged to attend to it; but if the former, in playing his next move, were to say "Check," each player must retract his last move, and he that is under check must obviate it.

19. If the king have been in check for several moves, and it cannot be ascertained how it occurred, the player whose king is in check must retract his last move and free his king from the check; but if the moves made subsequent to the check be known, they must be retracted.

20. Should a player say "Check" without giving it, and his adversary, in

consequence, move his king or touch a piece or pawn to interpose, he may retract such move, provided his adversary has not completed his last move.

21. Every pawn which has reached the 8th or last square of the chess-board must be immediately exchanged for a queen, or any other piece the player may think fit, even though all the pieces remain on the board. It follows, therefore, that he may have two or more queens, three or more rooks, bishops, or knights.

22. If a player remain, at the end of the game, with a rook and bishop, with both bishops only, with knight and bishop only, &c., against a rook, he must check-mate his adversary in fifty moves on each side at most, or the game will be considered as drawn; the fifty moves commence from the time the adversary gives notice that he will count them. The law holds good for all other check-mates of pieces only, such as queen, or rook only, queen against a rook, &c., &c.

23. If a player agree to check-mate with a particular piece or pawn, or on a particular square, or engage to force his adversary to stale-mate or check-mate him, he is not restricted to any number of moves.

24. A Stale-mate is a drawn game.

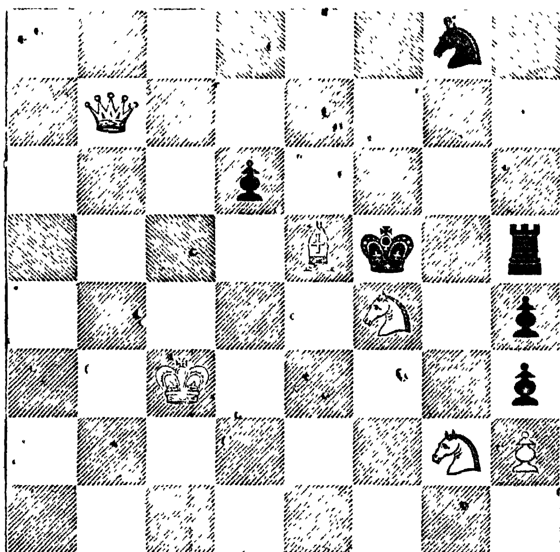
25. If a player make a false move, castle improperly, &c., &c., his adversary must take notice of such irregularity before he touches a piece or pawn, or he will not be allowed to inflict any penalty.

26. Should any question arise respecting which there is no law, or in case of a dispute respecting any law, the players must refer the point to the most skilful disinterested bystanders, and their decision must be considered as conclusive.

Having mastered the foregoing laws, here are now a few plain rules for general guidance, and then we will leave the student to practice the games and problems which follow:—

The plan of attack should be formed from the commencement of the game,

PROBLEM No. 1.



WHITE.

and no move should be made that does not tend to forward it. The player should, moreover, beware of being diverted from a well-concerted plan by taking advantage, without consideration, of what may *seem* to be an accidental move on the part of his adversary. It may be a trap. Be careful not to crowd your men together, or you may find yourself embarrassed by one or two which are worse than useless—you cannot move them, and they are in the way of those you can. For the same reasons, if you can drive your antagonist to crowding, so much the better. You do not always gain by taking a piece, nor is "man for man" invariably an equal transaction. Should you, however, happen to find yourself crowded in any part of the board, you may improve yourself by adopting the man for man principle, when your position is otherwise hopeless. Never make a move without duly weighing the probable result, and never fail to keep a sharp eye on your enemy's knights, in consideration of their peculiar privileges.

PROBLEM No. 1.

White to play, and mate in four moves.

SOLUTION.

WHITE.	BLACK.
1. K to Q 3rd	K takes B, or (*a*)

(If Black play 1. R to R 3rd the reply is 2. Q to K 4th (ch), 3. Kt takes R P (ch), &c. If he play 1, P takes Kt, then follow 2. Q to K 4th (ch), 3. Kt to K 2nd, &c. Again, if he play 1. R to R 2nd, then ensue 2. Q takes R, and mate in two more moves.)

(*a*) 1. Kt to K B 3rd

(If 1. Kt to K 2nd, White plays 2. to Q K 4th (ch), 3 Kt to K 6th (ch), &c.)

WHITE.	BLACK.
2. Q to Kt 7th (ch).	Kt to K B 3rd

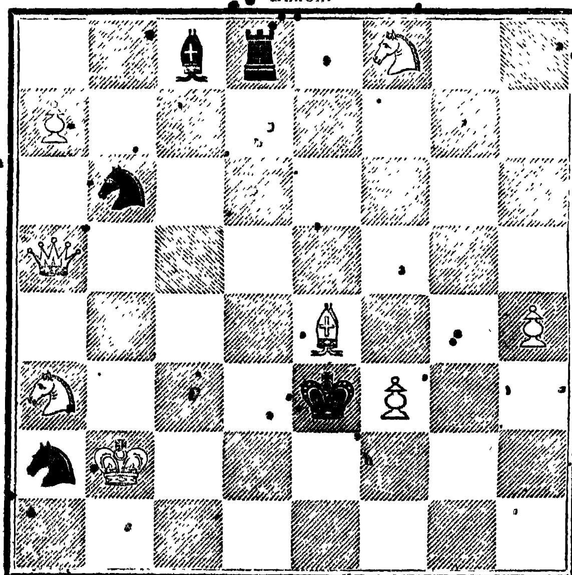
(If he play 2. K to B 4th, then White answers with 3. Q to Kt 6th (ch), and mates next move.)

3. Kt takes P at R 4th and mates next move.

2. Kt to 3rd (ch)	K takes B (best)
3. Kt to Kt 6th (ch)	K to K 3rd
4 Q mates.	

PROBLEM No. 2.

BLACK.



WHITE.

PROBLEM No. 2.

White to play, and mate in five moves.

SOLUTION OF PROBLEM No 1.

WHITE.	BLACK.
1. Q to K sq (ch)	K to Q 5th (best)
2. Q to K Kt sq (ch)	K to K 4th
3. Q to K Kt 7th (ch)	K to Q 3rd
4. Q to Q B 7th (ch)	K takes Q
5. Kt to Q Kt 5th (mate)	

Chest, CARE OF THE.—Those who pursue sedentary in-door employment, use the lungs but little, breathe but little air into the chest, and thus, independent of injurious positions, contract a wretchedly small chest, and lay the foundation of the loss of health and beauty. This can be perfectly obviated by attention to the manner of breathing. The lungs are like a bladder in their construction, and can be stretched open to double their size with perfect safety, giving a noble chest and perfect immunity from consumption. On arising from bed in the morning, place yourself in an erect posture, the shoulders thrown off the chest; now inhale all the air you can, so that no more can be got in; now hold your breath and throw your arms off behind, holding your breath as long as possible. Repeat these long breaths as much as you please. Done in a cold room it is much better, because the air is so much denser, and will act much more powerfully in expanding the chest. Exercising the chest in this manner will enlarge the capability and size of the lungs.

Chest Preservers.—No portion of the human body requires protection from cold more than the chest. Various chest protectors, as they are termed, have been devised for this purpose, and the most popular of these are made of wash-leather, lined, or of hare or rabbit-skins, also lined. As at present made and used these are very dangerous contrivances. They keep out the cold it is true, but they hinder the exhalation so necessary to health constantly going on from the surface of the skin, and to a greater extent in the region of the chest, where the lungs are situated.

Those who employ them are often in a high state of fever, especially felt when the weather changes suddenly from being cold to a mild temperature; colds are frequently thus generated, the causes of which are unknown to the sufferers, or believed to arise from other circumstances than that pointed out.

To render chest protectors useful for the purpose of keeping the chest warm, they should be perforated with a number of small holes about the size of a grain of pearl barley, so as to permit the escape of perspiration from the pores of the skin. The prepared thin leather and hare-skin protectors, unless perforated, retain the impurities that are constantly being exuded.

The use of flannel for the same purpose is not liable to the same objection, it being a porous material. In all cases persons should have several of them, in order to admit of a frequent change. Unless the suggestions above pointed out are attended to, these useful articles of clothing, instead of being chest protectors, are most injurious.

Chicken Salad.—Boil a chicken that weighs not more than a pound and a half. When very tender, take it up, cut it in small strips; then take six or seven fine white heads of celery, scrape and wash them; cut the white part small, in pieces about three quarters of an inch long, mix it with the meat of the fowl, and just before the salad is sent in, pour a dressing made in the following way over it:—Boil four eggs hard; rub the yolks to a smooth paste with two tablespoonfuls each of olive oil, and made mustard; one teaspoonful each of salt and strong vinegar. Place the delicate leaves of the celery around the edges of the dish. White-heart lettuce may be used instead of celery.

Chickweed.—This humble plant is well known to bird fanciers, and though looked upon as a lowly weed, yet it has properties which prove the protecting hand of Nature for its preservation. This plant is found wild in most parts of the world. It is an annual, and flowers almost through the whole year. Dr. Withering says that

"it grows nearly in all situations, from damp and almost boggy woods to the driest gravel walks in gardens; but in these various states its appearances are very different, so that those who have only taken notice of it as garden chickweed would hardly know it in woods, where it sometimes runs to half a yard in height, and has leaves nearly two inches long and more than one inch broad. In its truly wild state, in damp woods and hedge bottoms, with a northern aspect, it has almost always ten stamens, but in drier soils and sunny exposures the stamens are usually three or five. The flowers are upright and open from nine in the morning till noon, but if it rains they do not open. After rain they become pendant, but in the course of a few days rise again. It is a remarkable instance of the sleep of plants: for every night the leaves approach in pairs, including within their upper surfaces the tender rudiments of the new shoots; and the uppermost pair but one, at the end of the stalk, is furnished with longer leaf-stalks than the others, so that they can close upon the terminating pair, and protect the end of the branch. The young shoots and leaves, boiled, are similar to spinach, and are equally wholesome. It is a grateful food to small birds and young chickens. Chickweed was formerly used for medical purposes.

Chicory.—See *Adulterations.*

Children, Earliest Intellectual Education of.—On this important subject we cannot do better than quote the words of Mrs. Barwell, a renowned name in the education of the young:—"Cultivate by exercise the five senses of *seeing, hearing, touching, smelling, tasting.* Teach the child to observe forms, sizes, weights, colours, arrangements, and numbers. Practise all a child's knowing faculties on objects—feathers, shells, ribbons, buttons, pictures of animals, &c. Practise distinct articulation. If, at four years of age, a child has any defect, it ought to be systematically taught to pronounce correctly. Let a child put its toy to any other than the intended use, so that it does not destroy it; this exercises invention. Encourage construction and furnish materials, leaving ingenuity to work. Accustom the child to find its own amusement. It is the most unprofitable slavery to be constantly finding amusement for it.

Remember that children love stories—the simpler the better—and delight to have them told again and again. Always give them a moral turn and character. Be sparing of the marvellous, exclude the terrible and horrible, and utterly proscribe all ghost and witch stories.

Accustom children to reptiles, insects, &c., and prevent the foolish fear of those creatures which is often found in adults, and leads to the constant and most unnecessary destruction of them. Induce a child to give attention, by presenting objects, and giving narratives which interest it. Do not repeat that it must give attention. Avoid employing female servants as nurses who possess coarse habits and sentiments, or whose mode of speaking is coarse or indelicate. No difference need at first be made between the rearing and training of male and female infants.

Let children be taught that the Great Creator has impressed laws on all things, which operate uniformly, and that they are in safety when they behave well and have a reverence for God. They should be taught that ghosts and apparitions are wholly fanciful; that all the spectres they need guard against are guilty fears; and if they are virtuous, these will never haunt them.

It is a foolish and pernicious practice of relating stories to young children, to excite alarm and terror. The common tales of Blue Beard and giants, of spectres and ghosts, are extremely injurious in their influence and effects. Unfounded and absurd notions are received, that serve only to terrify, and which, even by correct knowledge afterwards received, cannot be entirely subdued or eradicated. It has been known that several men of great learning were unable to get rid of early but unreasonable fears, produced in childhood by the stories of nurses or illiterate parents, and who were occasionally under their unhappy influence, though their sober judgment told them they were fictitious.

Children, Feeding.—Children, who while growing must form more tissue than they waste, consume more food in proportion to their weight, and possess more active digestions, than adults. They should have their meals with shorter intervals, and care should be taken to avoid all influences that may disturb digestion. Prominent among these is a deficiency of clothing. The human body, like any other thing of greater warmth than the surrounding air, has a constant tendency to part with its excess of heat by radiation, and to check this cooling process we envelope ourselves in non-conducting fabrics. It stands to reason that the greater the surface exposed the more readily will radiation occur; and yet we frequently see children with chest, arms, and legs bared by fashion in the coldest weather, without regard to the general depression of temperature, which must also involve that of the digestive organs.

The diet of children should be regulated by a consideration of their functional capacities. In infancy, Nature furnishes in the mother's milk all requisite elements in a condition requiring no mechanical treatment, but merely simple chemical action. A little later, as the first teeth begin to make their appearance, food easily separable may be allowed; and, as the masticating apparatus advances towards perfection, articles requiring more tearing and grinding may be gradually added to the catalogue.

The activity of the digesting secretions increases in proportion to dental development, so that many substances, such as potatoes, which are easy to masticate, are not digestible in early childhood.

The milk of different animals varies in constitution as regards the proportion of its constituents, human milk containing more water and sugar than that of the cow. For this reason, when an infant is "brought up by hand," or in the process of weaning, it is usual to dilute and sweeten cow's milk, in order to bring it nearer the human standard. Goat's milk would require more dilution, but no sweetening—its percentage of sugar exceeding that of the cow. It is extremely doubtful, however, whether the addition of water to cow's milk serves any good purpose; and it is certain that far too much is usually added. Human milk contains about 89 parts of water in 100; cow's milk about 86, or three parts less in 100; yet to compensate for this slight difference the latter is commonly diluted with double its bulk of water before giving it to a hungry baby. Be it always remembered that an infant's proper food is its own mother's milk, and that she who can suckle her own child and does it not is guilty of a serious offence against God's law.

Children, Hints to, on Manners at Home.—Never go up and down stairs, or about the house, like a trotting horse; step lightly, quickly, and orderly.

Never enter a house or parlour with your boots all slush and mud, or sit down with your hat or cap on.

Never stare people in the face. Are you conversing with any one—look him in the face with cheerful, dignified, respectful assurance. This is right; but to stare idly or wildly at strangers, or any one, as though you had never seen a human face, is exceedingly rude, and a sure mark of ill breeding.

Be polite, modest, and respectful to every one, especially to your superiors: "Charity vaunteth not itself, is not puffed up, doth not behave itself unseemly, seeketh not her own." What more unlovely, and painfully disgusting, than to see a youth, a mere stripling, assume an air of self-importance and disrespect towards his equals or superiors?

Never jerk, twitch, or slam doors or window-shutters, or bring them to violently. Be cautious and gentle in all your movements, or you may do serious mischief. We have known some little turbulents, in passing out and in, close the door with a slam-bang sufficient to shiver it! No polite or genteel boys and girls will do this.

Never be clownish or monkeyish. Some rude boys seem to pride themselves in buffoonery or drollery, in low, vulgar tricks, antic gestures, foolish jesting, and odd expressions. This low, shameful vulgarity may excite the laughter of fools "for the mouth of fools feedeth on foolishness;" but every one of good

common sense must look upon such behaviour with perfect disgust and abhorrence! And every youth thus acting the buffoon or mimic, lowers himself in the estimation of the wise and the good.

Few things prejudice the early chances of life more than rudeness of manners and coarseness of expression.

Children, On the Administration of Medicines to.—Dr. Wahn, having much to do with the diseases of children, wishes to impress upon practitioners the importance, in the case of some medicinal substances, of having them administered, whenever practicable, in their own presence. He also states some of the means he adopts to enable certain medicines to be more easily got down. Thus, the sub-nitrate of *bismuth*, in large doses, which is of such value in diarrhœa and the gastro-intestinal affections of children, often subsides to the bottom of the spoon when given in broth or milk; and it is much more readily taken also by children of about two years old when given in chocolate prepared with water, and thickened with tapioca or crumbs of bread. In this way seventy grains and more may be given night and morning. In the same way *iron* can be very readily given. *Rhatany* and *catechu*, two precious drugs, the action of which, when in small doses, is soon manifested in children, can also be very readily given in this chocolate pomade. Chocolate made with either milk or water and flavoured with vanilla, is usually very readily taken by children, and its dark colour facilitates the mixing with it of numerous coloured medicinal substances, which would be observed by the little patients were they given in milk, broth, or any infusion. Rhatany and catechu may also be well triturated and mixed with quince jelly, the flavour of which, while masking that of other substances, is very agreeable to children. *Sulphate of soda and sulphate of magnesia* are very difficult to get even adults to take. The sulphate of soda may often be administered to children by dissolving 10 parts in 150 of unsalted beef tea, and waiting until the child is sufficiently thirsty to swallow a cup of liquid almost without tasting it. *Corsican moss* is another substance which children take with difficulty; but, if an infusion be made and strained, and then added to unsalted beef tea, it will be readily swallowed. *Calomel* is one of the most difficult medicines to give when children are too young to swallow pills, which is the case under six years of age. Incorporating it in honey is the best means, rinsing the mouth afterwards to prevent any adhering to the gums. It should never be given in currant or any other jelly; a death having occurred a few years since from the conversion of the calomel into a bichloride. It is safest to prohibit any acid drink from being taken on the day that calomel is given. *Ipecacuanha* may be given in chocolate pomade, or in honey. In forcing a child to swallow, the usual practice is to pinch the nose; but a part of the medicine will be rejected if the precaution be not taken to keep the nose completely closed; *until deglutition is completed.* So, too, when medicines are thus forced down a child, it must be kept the whole time in a *sitting posture*, until deglutition has been accomplished.

Children's Clothing.—A distinguished Paris physician says:—"I believe that during the twenty years that I have practised my profession in this city, 20,000 children have been carried to the cemeteries, a sacrifice to the absurd custom of exposing their arms naked. Put the bulb of a thermometer in a baby's mouth, the mercury rises to ninety degrees. Now carry the same to its little hand; if the arm be bare, and the evening cool, the mercury will sink to fifty degrees. Of course all the blood that flows through these arms must fall from ten to forty degrees below the temperature of the heart. Need I say, when these currents of blood flow back into the chest, the child's vitality must be more or less compromised? And need I add that we ought not to be surprised at the frequent recurring affections of the tongue, throat, or stomach? I have seen more than one child with habitual cough and hoarseness, choking with mucus, entirely and permanently relieved by simply keeping the hands and arms warm. Every observing and progressive physician has daily opportunities of witnessing the same cure."

Children's Playthings.—Playthings that children make for themselves are a great deal better than those which are bought for them. They employ them a much longer time, they exercise ingenuity, and they really please them more. A little girl likes better to fashion her doll's cups and saucers of acorns, than to have a set of earthern ones supplied. A boy takes ten times more pleasure in a little wooden cart he has pegged together, than he would in a painted and gilded carriage bought at the toy-shop; and we do not believe any expensive rocking-horse ever gave so much satisfaction as we have seen a child in the country take with a cocoa-nut husk, which he had bridled and placed on four sticks. There is a peculiar satisfaction in inventing things for one's self. No matter though the construction be clumsy and awkward, it employs time (which is a great object in childhood), and the pleasure the invention gives is the first impulse to ingenuity and skill. For this reason the making of little boats and mechanical toys should not be discouraged; and when any difficulty occurs above the powers of a child, assistance should be cheerfully given. If the parents are able to explain the principles on which machines are constructed, the advantages will be tenfold. (See *Children, Earliest Intellectual Education of.*)

Chimneys.—In 1200, chimneys were scarcely known in England; one only was allowed in a religious house, one in a manor ditto, one in the great hall of a castle, or lord's house; but in other houses they had nothing but what was called "Rere Desse," where their food was dressed, and where they dined, the smoke finding its way out as best it could. In King Henry VIII.'s time, the University of Oxford had no fire allowed, for it is mentioned that after the stewards had supped, which took place at eight o'clock, they went again to their studies till nine, and then, in the winter, having no fire, they were obliged to take a good run for half an hour to get heat in their feet before they went to bed. Hollingshed, contemporary with Elizabeth, describes the rudeness of the preceding generation in the arts of life. "There were," says he, "very few chimneys, even in capital towns; the fire was laid to the wall, and the smoke issued out at the roof, or door, or window. The houses were wattled, and plastered over with clay; and all the furniture and utensils were of wood. The people slept on straw pallets, with a log of wood for a pillow."

China and Earthenware, To Clean.—They should be washed in plenty of soap and warm water, rinsed clean in a second bowl of water alone, either warm or cold, should be then turned down to drain, and afterwards wiped dry with linen tea-cloths. Settings of any liquid, which have been suffered to dry up at the bottom of earthen vessels, may be dissolved by a little pearl-ash, or soda and water.

Chintz, To Wash.—Take two pounds of rice, and boil it in eight quarts of water till soft. When done, pour the whole into a tub; let it stand till about the warmth used for coloured linens, then put the chintz in, and use the rice instead of soap; wash it in this till the dirt is out; then boil a second quantity as above, but strain the rice from the water, and mix it in warm water; wash in this till clean; afterwards rinse it in the water the rice has been boiled in, and this will answer the end of starch, and no dew will affect it, as it will be stiff as long as you wear it. If a gown, it should be taken to pieces; and when dried, be careful to hang it as smooth as possible. After it is dry, rub it with a sleek stone, but use no iron.

Christian Names.—From careful calculations that have been made two-thirds of all the children in England and Wales are called by one of the following twenty-five names, certain that in any 100,000 children they will occur in the following order:—

Order.		Names.		Numbers.
1	...	Mary	...	6819
2	...	William	...	6590
3	...	John	...	6230
4	...	Elizabeth	...	4617
5	...	Thomas	...	3876
6	...	George	...	3620
7	...	Sarah	...	3602
8	...	James	...	3066

Order.	Names.	Numbers.
9	Charles	2323
10	Henry	2060
11	Alice	1925
12	Joseph	1780
13	Ann	1718
14	Jane	1697
15	Ellen	1621
16	Emily	1615
17	Frederick	1604
18	Annie	1580
19	Margaret	1546
20	Emma	1540
21	Eliza	1507
22	Robert	1323
23	Arthur	1237
24	Alfred	1232
25	Edward	1170

Total number of children (out of 100,000) registered under the above 25 names, 65,892.

Christmas Eggs.—Break as many fresh eggs as you think will suffice for your purpose; keep the yolks and whites separate, and sweeten all. Have a very well cleaned bladder, fill it with the yolks, tie it tight, put it into boiling water, and turn it about until the eggs are well done. Remove the bladder, and place the yolks inside another bladder large enough to contain the whites as well; fasten securely, and boil till done. Take away the bladder, and serve the eggs upon jam beaten up with custard.

Christmas Surprise Eggs.—Empty the eggs by making a hole at each end of the shell and blowing them; clean and dry the shells, and with a little yolk of egg and flour stop up the hole at one end; let this harden properly. Fill the shells with it by means of a small funnel; stop up the remaining orifices; throw the stuffed shells into boiling water. Take them up after boiling ten minutes, remove the paste from the ends and serve them in a nest or an old china bowl.

Christmas-Eve Baked Eggs.—Melt a good piece of butter in a deep dish; break into it six eggs, keeping them whole as for frying. Chop up any kind of hot pickle, such as capsicum, cauliflower or gherkins; sprinkle them thinly on the eggs, put them into the oven for five minutes, and serve quite hot.

Christmas, Hints for.—Pay off every debt of kindness that you are able, and call in by gentle remembrances all that are owing to you.

Be not content with giving your coals and blankets to the poor. Warm their hearts with kind language, as well as their bodies with clothing.

Make up your mind to do some little good every day. Farthings make pence, pence shillings, shillings pounds, and pounds a rich man. Small charities, in like manner, soon mount up; and with care a good capital and happiness may be realised.

Keep up all the old seasonable observances that time has hallowed, which create good feeling and fellowship, and which consist of those recreations in which the young join as actors, and the old enjoy as spectators.

Be sure and decorate your house with holly. Evergreens are Nature's promises of returning summer and a fruitful season. The scarlet berries are pretty and cheerful, and the prickly leaves are excellent weapons to drive away care, which with proper management will become extinct at Christmas time.

Establish a court of equity in your hearts, wherein to pronounce sentence on any of those domestic errors and crimes of which the law can take no cognisance. Make your good sense the judge, and the wholesome commandments of Scripture your jury. Examine and cross-examine the witnesses—listen to the counsel (Mr. Feeling) and the counsel for the defendant (Mr. Passion). You already know the evidence, and if the jury return a verdict of guilty, lay a heavy fine on the delinquent, and bind him in heavy sureties to keep in future the moral peace which he has violated.

Chrisin or Chrisom.—Chrisin was anciently used in religious services, and was a confection of oil and sweet balsam, consecrated by the bishop, and used in baptism, confirmation, extreme unction, &c. The Chrisom (*chrismale*) was the face-cloth or piece of linen laid over the child's head when it was baptized; and hence, in old bills of mortality, such children as died in the month, were called *chrisoms*.

Chub, The, or Chevin.—Like the perch, this fish is a very bold biter, and will rise eagerly at a natural or artificial fly. They spawn in June, or at the latter end of May, at which time they are easily caught by a fly, a beetle with his legs and wings cut off, or still more sucessfully by a large snail. When they are fished for at mid-water or at bottom, a float should be made use of; when at top it is customary to dip for them, or to use a fly, as if a trout were the angler's object. Strong tackle is also requisite, as they are a heavy fish, and usually require a landing-net to pull them out. Their average length is from ten to fourteen inches.

Church Festivals.—See *All Saints' Day, Ash Wednesday, Candlemas Day, Christmas, Easter, Good Friday, Michaelmas, Palm Sunday, Shrove Tuesday, and Whitsuntide.*

Cinnamon.—See *Adulterations.*

Climates. — See *Consumption,* and *Health Resorts.*

Clocks.—The day began to be divided into hours from the year 293 B.C., when a sun-dial was erected by L. P. Cursor, in the temple of Quirinus, at Rome. In England the measurement of time was, of old, uncertain and difficult. One expedient was by wax candles—three inches burning an hour, and six wax candles burning twenty-four hours. These candles were invented by Alfred, clocks and hour-glasses not being then known in England (A. D. 886).

Who was the first inventor of clocks and watches is unknown, but from Dante, the Italian poet, it is clear that striking clocks were known in the latter part of the thirteenth century. It appears also, that at that period, clocks were known in England. In 1288 a fine was imposed on the Chief Justice of the King's Bench, which fine was applied to the purpose of furnishing a clock for the famous clock-house near Westminster Hall. Chaucer, who was born in 1321, and died in 1400, introduces a notice of clocks in his poetical works, thus—

> "Full sickarer was his crowing in his loge,
> As is a clock or any abbey orloge."

Clocks with strings and weights, hung against the wall, something like Dutch clocks, are represented in MSS. of this period. One of these was in the tapestry of Edward IV., which was hung in the painted chamber of the palace of Westminster.

There is reason to believe that the clocks made at this early period were not the invention of one man, but a compound of successive inventions, each worthy of a separate contributor; thus—first, wheel-work was known and applied in the time of Archimedes; second, a weight being applied as a maintaining power, was probably in the first instance a fly similar to that of a kitchen jack, to regulate the velocity; third, the ratchet wheel and click, for winding up the weight without detaching the teeth of the great or main wheel from those of the pinion in which they were engaged, would most likely be the next contrivance; fourth, the regulation by a fly being subject to great changes, from the variations of density in the atmosphere, and the tendency of a falling body to accelerate its motion, would then give rise to the alternating motion of the balance, with which invention some kind of escapement would be coupled; fifth, these two last-mentioned inventions would necessarily lead the way to a dial-plate, and its necessary adjunct, a hand or pointer; sixth, the striking part, to proclaim at a distance the hour that was indicated by a mechanical power, would complete the list of inventions.

Such appear to have been the component parts of the rude clock of De Wych, the most ancient of which we have any description. In 1544 the master clock-makers of Paris obtained from Francis I. a statute in their favour, forbidding any one who was not an admitted master to make clocks, watches, or alarums, large or small. This statute points to portable clocks; and before such could be made, the weights, as the moving power, must have given place to a main-spring.

In 1639 Galileo Galalei made known an important discovery which he had made; namely, that heavy bodies suspended by strings of the same length, made their vibrations, whether short or long ones, in almost exactly the same spaces of time. This discovery was the

prelude to a third era in clock-work—the origin of the pendulum clock, which continues in use to the present time, and which it seems almost impossible to excel.

It has been a matter of contention as to who first applied the pendulum to the clock, but Huyghens is generally considered to have been the inventor. Harris, a London artist, made a long pendulum clock in 1641, and some conclude that he is more entitled to the honour of the invention than either Galileo or Huyghens.

In 1680 an important addition was made to the improvements in clocks by a London clock-maker named Clements. This was the invention of the anchor escapement, the great advantage of which over the old crown wheel is, that it allows the escape to take place in a small angle of vibration. This change in the escapement led to the practice of suspending the pendulum by a thin and flexible spring, which was, also, the invention of Clements.

A fourth and last era in the history of clockwork commenced with the beginning of the 18th century. It had been known for more than half a century, that metals expanded and contracted; and although the use of the clock for astronomical purposes required some compensation for the lengthening and shortening of the pendulum, art was slow in supplying the desideratum. At length in 1713 George Graham, by substituting a jar of mercury for the pendulum ball, succeeded in retaining the point of suspension and the centre of oscillation at the lever distance from each other. But Graham himself knew his invention to be imperfect. Such a pendulum was liable to break, and he conceived an idea of an opposite expansion of different metals as a compensation for a pendulum. But Graham was unable to carry out his own idea; he could only suggest, not execute. What he failed to do, however, was effected by a humble mechanic named Harrison. By dint of perseverance, he not only astonished the world by his improvements in horological machines, but constructed a time-keeper which determined the longitude within such limits as to procure for him the munificent parliamentary reward of £20,000.

It would almost appear that by this time the clock had received its finishing stroke as regards its further improvement, but since then there have been many alterations, if not improvements, made in its various parts, by different artists, both in England and on the Continent.

Cloth Measure.

2¼ Inches	...	=	1 Nail.
4 Nails, or 9 inches		=	1 Quarter.
4 Quarters, or 36 in.		=	1 Yard.
5 Quarters	...	=	1 English Ell.
3 Quarters	...	=	1 Flemish Ell.
6 Quarters	...	=	1 French Ell.

Clothes, To make Waterproof.—Into about a gallon of water put a quarter of an ounce of yellow soap, and let the same boil for half an hour, skim, and when cold put in the cloth garment, let it remain in soak for twenty-four hours; take it out and hang it to drain, and when half dry put it into the following solution: half a pound of alum, quarter of a pound of sugar of lead, dissolved in three gallons of water. Let the cloth be thoroughly soaked, and then hung to dry. This process entirely destroys the capillary attraction in the fibres and threads of the cloth, and the rain or wet pours off the surface without lodging or penetrating through the cloth. The solution has no effect in altering the texture or appearance of the cloth or article immersed. Great care must be taken as regards the sugar of lead, not to leave it where children, or persons ignorant of its qualities, can gain access to it, as it is a powerful poison.

Clothes-Posts.—These necessary helps to the washerwoman, if left standing in the ground, soon decay at the bottom; but if fitted into sockets so as to be removable, they will last for years. The sockets should be made of 1-inch elm, 18 inches in length, tapering downwards. When finished they ought to be about three inches square inside, at the upper end. They are to be driven firmly into the earth till just level with the surface; the posts are then made to drop in and stand firm, and can be taken out and put under shelter, when not in use. A cover should be fitted to each socket,

to keep litter from falling in when the post is removed. A drying-ground should not be too much exposed to the wind, as the violent flapping tears the corners of table-cloths, sheets, &c., and over-blown linen feels flabby after mangling.

Clothes, To Extinguish Burning.—There are few accidents more terrible than the setting fire to the loose vestments worn by women. Instantly the lower part of a dress is ignited, the flames rush upwards with great velocity. Even if almost immediately extinguished, so large a portion of the skin is scorched that death often ensues from shock to the system.

The first impulse of the victim is to rush about shrieking for help; the second to open the door, if possible, and run along the passages out into the air, thus fanning the flame to the utmost. No line of action could be more fatal in its consequences.

It cannot be too constantly borne in mind that the only safety for the person enveloped is to fall down quickly on the floor; if a small portion of the dress only be ignited, it may be put out by thrusting it under the body and rolling upon it. By rolling over and over, the person on fire is comparatively safe, as the flames ascend away from the body, and thus do comparatively little damage.

The course of action for bystanders is evident; it is to seize any woollen covering near at hand, as a blanket, shawl, hearthrug, coat or curtain, throw it instantly around the imperilled one, and roll her on the floor in the folds.

Scores of lives have been saved by bystanders taking off their coats, and instantly extinguishing the flames in this manner.

As soon as the victim is on the ground, the greatest danger is over; the flames no longer rise to the face, and the breathing of the over-heated air, which is always fatal, is prevented.

It may be asked what is the best treatment to be adopted for the sufferer before the arrival of medical aid.

If the burn is severe, the patient should be laid in a bed, and the clothes removed with as little disturbance as possible; they should, if requisite, be cut off, so as to avoid the slightest additional injury to the burned surface.

Then, to exclude the air, some application is requisite; cotton-wool does very well, but the simplest, the nearest to hand, the most easily applied, and certainly one of the most efficacious, is flour, profusely dredged on out of a common flour-dredger.

It cannot be too strongly borne in mind that cold water or other cold applications to an extensive burn are *fatal*.

Persons suffering from burns rarely die from the immediate injury; the cause of death is often the shock to the system, or congestion of the lungs, both of which would be greatly intensified by cold applied to the outer surface of the body.

Clothing, Gentlemen's, Hints on the Management of.—A real gentleman is distinguished by the neatness of his attire, the goodness of the material, personal cleanliness, and an unaffected carriage; avoiding a display of rings and brooches, and any *outré* foppishness.

A material point for the economist to attend to is, however, to be careful in the wear of his clothes. For this reason the coat should be thrown off when at home, and either some older garment or a morning-gown substituted. Clothes take more damage in hanging about, rubbing the cuffs against chairs and desks, than when worn in walking. Trousers, too, are more deteriorated in a sitting than a standing posture, particularly by bagging at the knees, and it is the better economy, before sitting down at home to dinner, if there be no engagement for the evening, to put on a homely suit kept for the purpose.

Woollen clothes must be occasionally beaten, so as to raise the dust before brushing, and this, as well as the brushing, should be performed in a yard or a passage, because when done in a kitchen, not only is there a liability of grease, but the minute particles of dust enter into the culinary preparations. In families where no man-servant is kept, young men should not be above performing this operation for themselves.

The following directions for *brushing* will be found useful:—First, as to dust-

ing: Having spread the garment on a wooden horse, beat it gently with a small switch or cane, free from knots. A lady's whip is the best dusting tool. Do not strike too hard, or you will break the mould buttons. Rub gently between the hands any spots of dirt set firm, and be sure that the garment is dry before you commence upon it.

Two clothes brushes should be provided, a hard and a soft one; and never use the former unless to remove fixed dirt. The soft brush does not wear off the nap, and will suffice to remove hair, lint, dust, &c. The brush improves after a little use, when the sharp edges of the bristles are worn off; and the brush usually called the blacking brush is one of the best for the purpose.

After dusting a coat, spread it out on a table, free from grease, with the collar towards your left hand; commence brushing the inside of the collar, then the back and sleeves. The nap of the cloth is towards the skirts, so let the strokes of the brush be in that direction. Next brush the two lapels, lastly the outside of the collar, and then fold it over and brush the inside in like manner. Wipe the dust off the table before you turn the garment, and if the coat is intended to be packed in a trunk, you must fold according to the following directions, but if for immediate wear, or to be laid along in a wardrobe or drawer, no further folding is necessary.

When the sleeves of the coat are brushed, turn them back, so that the crease comes just below the elbow; then turn the lapel over the folded sleeve, and finally turn the skirt up over the lapel, so that the end will come under the collar when folded down; then double it.

Waistcoats should be folded as little as possible, merely doubling them inside out.

Trousers should be brushed from the band downwards, the fore part then brought out so as to permit the legs to fold flat on each other; and they must be folded from the bottom, not the band.

A gentleman's wardrobe should be covered with a linen cloth, and frequent opportunities taken to air, as clothes are apt to acquire an unpleasant smell when kept close for any length of time, and moreover are subject to the moth. The best airing is to wear every garment occasionally.

Be particular to keep the clothes brushes clean, washing them occasionally in cold water with soap, or rubbing on paper placed over the edge of a board.

It sometimes happens that grease or paint spots appear. These are easily removed by oil of turpentine, or a hot iron pressed on the place over coarse brown paper, after scraping all that can be got off with a blunt knife.

Stains may be removed from light coloured clothes, such as drabs, buffs, or whites, with fuller's earth, but this is apt to take the colour out of dark cloths. It should be dissolved in a little boiling water, put on the spot when hot, held to the fire to dry, and then brushed out. Pitch is removed, first, by rubbing the place over with grease or oil, and then taking out the oil by the application of spirits of turpentine.

Clothing, Non-Inflammable.—We gather the following from a letter on the subject of making ladies' clothing non-inflammable, of Dr. Odling, of Guy's Hospital:—"The various means proposed for rendering textile fabrics non-inflammable were carefully investigated a short time back by the well-known chemists, Messrs. Versmann and Oppenheim. They showed that linen and cotton goods dried after a solution of one or other of several salts possessed the property of non-inflammability, and that the best results were obtained with a solution of sulphate of ammonia, or of tungstate of soda, neither of which liquids produce any injurious effect on the tissue or colour of the fabric. The tungstate of soda solution was found most applicable to laundry purposes, on account of its not interfering in any way with the process of ironing. Muslins, &c., steeped in a seven per cent. solution of sulphate of ammonia, or a twenty per cent. solution of tungstate of soda, and then dried, may be held in the flame of a candle or gas lamp without taking fire. That portion of the stuff in contact with the light becomes charred and destroyed, but it does not inflame, and consequently the burning

state does not spread to the rest of the material. (See *Animal Heat.*)

Clouds and Sky, COLOUR OF THE.—The clear transparent vapour of water absorbs more of the red rays of light than of any others, while the lower strata of the atmosphere within no great distance from the surface of the earth offers more resistance to the passage of the blue rays. This is especially the case at sunrise and sunset, and very perceptible in the case of dark-coloured fogs, through which the sun appears red. This is often due to only a few hundred yards' thickness of such a fog, and it is highly probable that the same effect will be produced by a thickness of as many miles of pure air containing watery particles very thinly disseminated.

It is thus Mr. Sorly explains nearly all the phenomena connected with the question. The blue colour of the sky is due to the absorption of a considerable amount of red light by aqueous vapour, far from the earth's surface; but if minute particles of liquid water form a thin mist, the blue of the sky will be diminished, as is the case in winter and in cold countries. If the air be much charged with transparent vapour, the blue colour will be deeper, and will thus become an indicator of rain. At sunrise and sunset the light of the sun has to pass through about two hundred miles of atmosphere within a mile of the surface of the earth in order to illuminate a cloud a mile from the ground. In passing through this great thickness the blue rays are absorbed to a far greater extent than the red, and much of the yellow is also removed. Hence clouds thus illuminated are red; but when the sun rises higher, the yellow light passes more readily, and the clouds become orange, then yellow, and finally white. Clouds in different parts of the sky, or at different elevations, might show these various colours at the same time, as is often the case.

Cloves.—Every part of the clove plant abounds with aromatic oil, but it is most fragrant and plentiful in the unexpanded flower-bud, which are the cloves of commerce. Cloves have been brought to the European market for more than 2,000 years. The plant is a native of the Moluccas and other islands in the Chinese seas. "The average annual crop of cloves," says Barnett, "is, from each tree, 2 or 2½ lbs., but a fine tree has been known to yield 125 lbs. of this spice in a single season; and as 5,000 cloves only weigh 1 lb., there must have been at least 625,000 flowers upon this single tree."

The oil of cloves may be obtained by expression from the fresh flower-buds, but the usual method of obtaining it is by distillation, which is carried on to a very great extent in this country. Few essential oils have a more extensive use in perfumery than that of cloves. It combines well with grease, soap, and spirit, and forms a leading feature in some of the most popular handkerchief essences. For essence of cloves, dissolve oil of cloves in the proportion of 2 oz. of oil to 1 gal. of spirit.

Clubs, THE GAME OF.—This game is exceedingly amusing when well played. The company who engage in the game divide themselves into two parties, each composed, if possible, of equal proportions of ladies and gentlemen. These parties then draw together, at a distance from one another, and send out two members, a lady and gentleman, one from each portion. These deputies leave the room, and fix on some object or some historical character, whichever has been previously decided on by the company, and then return, the lady going to the club from which the gentleman was selected, and the gentleman to the other. The members immediately commence a brisk series of questions relating to the chosen article—for instance: "Is it animal, mineral, or vegetable?" "Is it in the room?" "Is it portable?" Everything, in fact, that can be thought of to throw light on the restriction in these respects, and the object being to discover the secret as soon as possible.

The moment either club arrives at the truth, the fact must be announced by a clapping of hands—this being the most unmistakable plan, and preventing subsequent dispute. Whichever side has penetrated the mystery the earliest, acquires the two members, and the game re-commences, continuing till all have taken

their turn, when the club that contains the greatest number of members is announced the winner. This game is a modification of the celebrated "Twenty Questions."

Coal and Coke, Weights and Measures of.—

Coal.

2 cwt.	1 sack.
10 sacks	1 ton.

Coke.

3 bushels ...	...	1 sack.
12 sacks ...	...	1 chaldron.

Cock-a-Leekie Soup.—Boil from four to six pounds of good shin beef, well broken and sliced, until the liquor is very good. Strain it, and add a capon or large fowl, trussed as if for boiling. When it boils (which should be gently) add half the quantity of leeks intended to be used, well cleaned, carefully skinned, and cut in inch lengths; in half an hour add the remaining part of the leeks and a seasoning of pepper and salt. The great art in making this soup consists in boiling down the first portion of leeks so as to extract, together with the meat, all their flavour, and having the soup as thick of leeks as possible. The coarse, green part of the leeks should be rejected. Some persons thicken the soup with fine oatmeal; and when the flavour of the leeks is not required to be too potent, a little spinach and parsley is substituted for the second portion. Sometimes the capon is served in the tureen, whole or divided, with the soup.

Cocoa.—Dr. Lankester says:—"If we compare this composition with that of tea or coffee, we shall see that the flesh-forming and heat-giving elements of food are greatly in the ascendant. The albumen and gluten are in larger proportions than in bread, or oats, or barley." He also asserts that "it contains more fat, and as much flesh-forming matter as beef, weight for weight." Cocoa is said to be one of the most highly nitrogenous substances in nature. Now, it is nitrogen which makes, not fat, but serviceable flesh; the fibrin and albumen which constitute the muscular tissue, and also the filmy substance of the brain and nerves, contain 15 per cent. of nitrogen; and Dr. E. Smith informs us that the adult human being cannot remain in health and strength unless there be nearly half an ounce of nitrogen in his daily food. This is as much as there is in 12 ounces of lean beef, or in two pounds and a half of bread. The carbon also in the cocoa, and the sugar in the chocolate, maintain the vital heat, and make the consumer of these articles fat.

Dr. Lankester continues to say—"In estimating the value of cocoa as an article of diet, we must not estimate its medicinal action alone, but the influence of its heat-giving and flesh-forming matters. It can hardly be regarded as a substitute for tea or coffee; it is, in fact, a substitute for all other kinds of food, and, when taken with some form of bread, little or nothing else need be added at a meal."

The economic advantages of cocoa are described by Mr. P. L. Simmonds. He says, "It is of all domestic drinks the most alimentary;" and he further says: "It is without any exception the cheapest food that we can conceive, as it may literally be termed meat and drink."

The public dietaries are calculated upon the principle that an English soldier or sailor requires, in his daily food, five ounces of flesh-forming material, and ten ounces of carbon. Cocoa is partly relied upon for this supply—and rightly so, for a pound and a half of the unprepared cocoa-seed, the nibs in the rough, with their husks, worth, perhaps, eighteen-pence, contains five ounces of flesh-forming matter, being equivalent to more than two pounds of fine wheaten flour, or nearly five pounds of rice, or twenty-one pounds of potatoes.

The author of "The Chemistry of Common Life," says that, "Its analogy to theine leads to the belief that it exercises a similar exhilarating, soothing, hunger-stilling, and waste-retarding effect. But it has the advantage over tea and coffee of being eminently nutritious. It is rich in all the important principles which are found to co-exist in the most valued kinds of food."

Mr. Johnston, another eminent authority, remarks—"When mixed with water, as it is usually drunk, it is more properly to be compared with milk than infusions of

little direct nutritive value, like those of tea and coffee; and on the other hand, it has the great advantage over milk, and over beef-tea, and other similar beverages, that it contains the substance theo-bromine, and a volatile empyreumatic oil; thus it unites in itself the exhilarating properties of tea with the strengthening and body-sustaining qualities of milk."

The finest qualities of the inestimable plant named Theobromic Cacao are found, not in Mexico, but in the isthmus of Central America, Venezuela, and some of the West India Islands. It is an evergreen, which grows to the height of fifteen or twenty feet, with drooping bright green leaves, in shape oblong, eight or nine inches long, three inches broad, and pointed at the ends. The flowers and fruit, which it bears at all seasons of the year, grow out of the trunk and thickest part of the boughs, with stalks only an inch long. Humboldt saw the flower bursting through the earth out of the root, and wondered at the prodigious vital force of this plant. The flowers, which grow in tufts or clusters, are small, having fine coloured petals on a rose-coloured calyx; the fruit is a large pod, melon-shaped, usually five or six inches long, and three inches thick, deeply furrowed outside, which is green at first, but ripens to a rich yellow. The interior of the fruit-pod, divided into five lobes, contains a variable number of seed-beans imbedded in the luscious pulp of the fruit. It is the substance of these beans, each splitting into several nibs, that furnishes the exquisite material for human nourishment and refreshment which in England is popularly named cocoa.

In the West Indies, by the description of travellers, a "cocoa walk" or plantation is a very beautiful scene. As this delicate plant cannot bear the full blaze of the tropical sun, it is usually sheltered by rows of larger trees, sometimes bananas. Under their spreading foliage, which forms a shady roof, the cocoa trees, ranged by thousands and thousands in long rows, planted at regular intervals, flourish well along the banks of a river, and yield their valuable produce twice a year: the fruit being gathered at midsummer and Christmas.

The word Cacao belonged to the Mexican language; so did the word *Chocolatl*, imitating the clashing sound of stones beating the seeds to powder. In the 16th century, long before coffee was brought from Arabia, or tea from China, it was a favourite ingredient in the diet of the refined and luxurious classes. It was from the natives of Mexico, when that romantic country was won by the arms of Cortes, that the conquerors learnt to use a new and pleasant drink. They found the Emperor Montézuma in his splendid palace, sipping from a golden goblet "a potation of chocolate, flavoured with vanilla and other spices, stirred with a golden spoon, and reduced to a froth of the consistency of honey, which gradually dissolved in the mouth." The introduction of cocoa to the natives of modern Europe was one of the earliest benefits of the Spanish conquest of the New World. (See *Adulterations*.)

Coffee.—See *Adulterations*.

Coins, Old, To Cleanse.—The red rust may be removed from silver coins by vinegar, or by lemon-juice; the green, by a solution of ammonia; the rust on copper or brass coins should not be disturbed, as a coin which cannot be read when oxidised is seldom improved by being cleansed, but often rendered quite useless; a graver may occasionally be employed, but its safe use presumes a knowledge of the coin to be operated on, both portrait and legend.

Colours in Dress, Harmony of.—Of all colours, perhaps the most trying to the complexion are the different shades of lilac and purple. The fashionable and really beautiful *mauve*, and its varieties, are, of course, included in this category. In accordance with the well-known law of optics, that all colours, simple or compound, have a tendency to tint surrounding objects with a faint spectrum of their complementary colour, those above-mentioned, which require for their harmony various tints of yellow and green, impart these supplementary colours to the complexion. It is scarcely necessary to observe that of all complexions, those which turn upon the yellow are the most unpleasant in their effect, and probably for this reason, that in this climate

it is always a sign of bad health. But, it will be asked, is there no means of harmonising colours, so beautiful in themselves, with the complexion, and so avoiding these ill effects? To a certain extent this may be done, and as follows:—

Should the complexion be dark, the purple tint may be dark also, because, by contrast, it makes the complexion appear fairer; if the skin be pale or fair, the tint should be lighter. In either case the colour should *never* be placed next the skin, but should be parted from it by the hair, and by a ruche of *tulle*, which produce the neutralising effect of grey. Should the complexion still appear too yellow, green leaves, or green ribbons, may be worn as trimmings. These will often neutralise lilac and purple colours, and thus prevent their imparting an unfavourable hue to the skin.

Scarcely less difficult than *mauve* to harmonise with the complexion is the equally beautiful colour called "magenta." The complementary colour would be yellow or green. "Magenta," therefore, requires very nice treatment to make it becoming. It must be subdued when near the skin, and this is best done by intermixture with black, either by diminishing its brightness by nearly covering it with black lace, or by introducing the colour in very small quantity only. In connection with this colour, Mrs. Merrifield says, "I have recently observed some curious effects. First, as to its appearance alone; if in a great quantity, the colour, though beautiful in itself, is glaring, and difficult to harmonise with its accompaniments. Secondly, as to its combination with black; if the black and the magenta colour be in nearly equal quantities—such, for instance, as in checks of a square inch of each colour—the general effect is dull and somewhat neutral. If, on the contrary, the checks consist of magenta and white, alternately, a bright effect will be produced. Again, if the ground be black, with very narrow stripes or cross-bars of magenta colour, a bright, but yet subdued effect will result. This last effect is produced on the principle that as light is most brilliant when contrasted with a large portion of darkness—like the stars in a cloudless sky—so a small portion of bright colour is enhanced by contrast with a dark, and especially a black ground.

Yellow, also, is a difficult colour to harmonise with the complexion. A bright yellow, like that of the buttercup, contrasts well with black, and is becoming to brunettes when not placed next the skin; but pale yellow, or greenish yellow, suits no one, especially those with pale complexions. Its effect is to diffuse, by contrast, a purple hue over the complexion, and this is certainly no addition to beauty.

Blue is favourable to most complexions; light or sky-blue especially so to fair persons with golden hair; fuller tints to those who are less fair, or in whom years have developed more of the colour of the sere and yellow leaf peculiar to autumn. It often happens that as persons advance in years, colours which suited them in youth cease to be becoming; pink, for instance, agrees well with a youthful complexion and fair skin, but it does not harmonise with the yellow tints of more advanced age; in this case either sky-blue, or pure deep blue, will be substituted with advantage for pink.

Greys of various shades and tints for dresses and mantles, by their vicinity to the skin, increase the beauty of the flesh tints; while monotony is avoided, and variety, one of the great elements of beauty, is obtained, by the introduction of a little positive colour, either as trimming, or on other parts of the dress.

As in a landscape, Nature harmonises everything with greys and browns, setting them off here and there, near the eye, by small portions of pure colours—so the broken tints and neutral colours, such as black and white, have an admirable effect in draperies, and help to clear up the complexion. It is even possible for ladies to wear skirts of colours which are not suitable to the complexions of the wearers, when they are effectually separated from the flesh by the intervention of the neutral-tinted jacket or mantle. The effect is more agreeable when the contrast between the black of the drapery and the colour of the skin is softened by collars and sleeves of white lace or muslin.

Colours, Symbolic Meaning of.—*White* is the emblem of light, religious purity, innocence, faith, joy and life. In the judge it indicates integrity; in the sick man, humility; in the woman, chastity.

Red, the ruby, signifies fire, divine love, the Holy Spirit, head of the creative power, and royalty. White and red roses express love and innocence, or love and wisdom, as in the garland with which the ancients crowned St. Cecilia. In another sense, red signifies blood, war, hatred, and punishment. Red and black combined were the colours of purgatory.

Blue, or the sapphire, expresses heaven, the firmament, truth, constancy, fidelity.

Yellow, or gold, is the symbol of the sun, of the goodness of God, of initiation or marriage, faith or faithfulness. In the picture of the Apostles, St. Peter wears a yellow mantle over a blue tunic. Yellow also signifies inconstancy, jealousy, deceit; in this sense it is given to the traitor Judas, who is generally habited in dirty yellow.

Green, the emerald, is the colour of the spring, of hope, particularly hope of immortality, and of victory, as the colour of the palm and laurel.

Violet, the amethyst, signifies love and truth, or passion and suffering. Hence this colour was often worn by the martyrs.

Black expresses the earth, darkness, mourning, wickedness, negation, death, and is appropriate to the Prince of Darkness. In some old illuminated manuscripts, Jesus, in the temptation, wore a black robe. White and black together signify purity of life, and mourning or humiliation. Black, the colour of mourning now general throughout Europe, indicates eternal night. "Black," says Rabelais, "is the sign of mourning, because it is the colour of darkness, which is melancholy, and the opposite to white, which is the colour of light, of joy, and of happiness."

Colours, The Harmony of.—Raffaele was not more choice about his paintings than we find the sun to be. As winter departs, the modest violet first blossoms beneath a veil of leaves, which radiate back upon the fragrant little flower all the heat that departs from it. As the snows disappear, blossoms of other flowers open, which display themselves more boldly. In the passage from the last snows of winter to the first blossoms of spring, the harmony of colour is preserved; hill-sides and orchards are laden with delicate white, varied rarely by the pink upon the almond-tree. Petals of apple-blossom, floating on the wind, mimic the flakes of snow that were so lately seen. As the warm season advances, colours deepen, until we come to the dark crimson of autumn flowers and the brown of autumn leaves. This change is meant not only to be beautiful—it has its use. Why are the first spring flowers all white, or nearly white? Because when the winds are still cold, and when the sun is only moderately kind, a flower would be chilled to death if its heat radiated from it rapidly. But radiation takes place most freely from dark colours—from black, from the strongly defined greens, and blues, and reds.

In hot weather flowers and leaves so coloured cool more readily at night, and form upon their surface the healing dew. The delicate spring flowers are, therefore, of a colour that is at least ready to encourage radiation. For the same reason—because white substances give out least freely the heat that they contain or cover—arctic animals are as white as their native snows. For the same reason, too, the snow itself is white. When cold becomes severe, snow falls, and hangs like a fur mantle about the soil. If snow were black, or red, or blue, it would still let some of the heat escape which is retained under its whiteness. The colours even of men darken in hot climates; in the hottest they are made quite black. Black substances give out their heat most freely.

In regions subject to almost incessan cold, a short summer produces flowers of extremely vivid colouring. The summer, although short, is fierce, and the plants radiate fast that they may escape destruction. The dark verdure of the northern pines would cause them to lose heat with great rapidity. For compensation they are made to grow in pyramids that catch a cone of snow so cleverly as to great-coat them during the hard

weather. Birch trees that grow in the same forests rise among the pines like silver columns, and they are not shaped to catch the snow, because they do not want it. They have their own bright light clothing of a brilliant whiteness.

Combs, To Clean.—Tie one end of a silk thread to the handle of a wash-stand. Seat yourself before it with a napkin spread on your lap, and holding the other end of the thread tightly in your left hand, take the comb in your right and pass it hard and carefully along the silk, which should be made to go in between the teeth of the comb separately, so as to remove or scrape out all the impurities. Then rub the comb with a brush or a soft cloth; rinse it in warm soapsuds and wipe it dry.

Complexion, The.—Beauty of complexion depends on the free passage of the perspiration. Justly remarks a correspondent in *The Lady's Own Paper*, "All kinds of paint spread upon the skin, it is obvious, must interfere with the perspiration. How much more completely must the mode used by some ladies of covering the face with a cold cream before laying on the powder! Another injurious action of paint is caused by the power which the skin possesses to absorb any matter which comes in contact with it.

"There is but one wash of beauty in the world, and that the Almighty has bestowed upon us, I mean cold water. Let every lady who values the beauty of her complexion bathe her face full five or ten minutes every morning, no matter what the temperature is, with cold water. I have found that to be the great secret of a clear complexion. In the country the cold water alone will suffice, but in many parts of London soap, and even warm water, are necessary to remove the accumulated dust. In that case wash with plain yellow bar soap of the best quality, use a soft washing glove, lather the face, do not rub it harder than need be to clean it, and as quickly as possible after washing off the soap in warm water, bathe it with cold as above stated. If soap and cold water is used, throw away the soapy water and take fresh to rinse the skin well. A very soft towel should be used to dry the face, the softer the better; the skin should be thoroughly dried and treated gently, not rubbed. Those who are liable to spots or pimples will find hot water tends to foster them, the hotter the more so. Anything dirty will cause pimples on the surfaces of some susceptible skins by touching them; handkerchiefs, towels, chamber linen, and, above all, bonnet veils, should never be in use too long. Oatmeal frequently disorders the complexion, and causes the very spots it is supposed to heal; it is of a heating nature.

"A daily bath is an adjunct to the beauty of the skin, and so is everything that conduces to health, such as early hours, avoidance of close, crowded rooms, a daily walk, pure air, and suitable diet. Too poor and too rich diet injure the skin equally.

"Care should be taken not to tan or freckle the skin. A black veil should not be worn in sunny weather. It is well not to wash the face too frequently; it should be made clean before retiring to rest at night, that nothing may obstruct the free action of the perspiration, and that, with the morning ablutions, should suffice. Of one thing be very careful; never wash the face when you are heated, or soon after walking or dancing, especially in cold water. Drinking cold water, also, at such times, is greatly injurious. Doing either is well known to cause a permanent discoloration of a frightful description. Tight lacing and tight boots are also sometimes the cause of a red nose or a skin disease.

"Rose water is harmless to the skin, and sulphur is frequently beneficial. A wash of rose-water and flowers of sulphur may be used when there is any disfigurement of the skin, such as we have just indicated. First wash the face clean, shake the bottle, and bathe the face at night for ten minutes. Let it dry unwiped. But unless there is any cause do not use any preparation; let well alone.

"It is pleasant after all to think that the finest beautifiers are within the reach of every one, and are such simple cosmetics as cold water, fresh air, good temper, and temperate habits. If we add to these

true piety, we may all of us reasonably hope to be 'beautiful for ever.'" (See *Colours in Dress.*)

Consumption, and the Italian Climates.—However agreeable to the senses warm air, sunny skies, and luxuriant vegetation may seem, they afford no proof of salubrity, nor of the beneficial effect of any climate. Madeira, with all its sanitary fame, is no exception to this rule. Malta is subject to great vicissitudes of temperature, and to the baneful effects of the sirocco and libeccio—African blasts.

The climate of the south of France is rendered most injurious to consumptive invalids by the influence of the mistral, the scourge of Provence. The mortality from consumption amongst the natives shows this.

Nice, which exhibits the luxuriant vegetation of the tropics, is subject to great alternations from heat to cold, and the deaths by phthisis are numerous, even amongst the inhabitants.

The climate of Italy, however delightful to persons in good health, affords no immunity from pulmonary disease. Northern Italy, which has been much overlooked by the profession, affords, in our opinion, two of the best localities for the residence of pulmonary invalids throughout the Italian peninsula—viz., Como and Venice. Invalids residing in Italy will find the summer climate of Lake Como the best adapted for pectoral affections. The transitions of temperature are more gentle here than at any other station in Italy, and its climate approaches nearer to equability than elsewhere.

Venice presents peculiar advantages. The climate of this delightful city is, in a great measure, exempt from those violent atmospheric perturbations which are the bane of the Neapolitan seaboard; whilst it possesses mildness of character and equability.

Genoa is admitted by all writers to be one of the most unfavourable localities in Italy for pulmonary complaints. Florence is equally prejudicial. The climate of Pisa is far too relaxing, humid, and smoky, to be beneficial in tubercular disease.

The Roman climate, if mild, is sedative and depressing; and, owing to its mildness and malarious emanations, cannot prove sanative, particularly in a malady characterised by depression of the vital force, and accompanied by vitiated nutrition.

Conversation.—To converse *well* is an art of much value. It is the most certain means by which to give a charm to social life, and by which dulness may be banished the moment it attempts to intrude itself. No other talent or amusement has an equal power at all times; music may often fail to withdraw our thoughts from unpleasant remembrances, and the theatre, ball-room, and card-table, are not always in unison with the state of our feelings. But it is not thus with conversation, which is scarcely ever so powerless as not to beguile the thoughts from even the most painful recollections. Conversation is at once the medium of affection, consolation, amusement and instruction. It is the means by which wisdom may obtain an influence over weakness and folly; piety over irreligion and immorality. To converse agreeably requires in the first place a *cultivated mind*, without which your conversation would be insipid to others. Another requisite is to have *well-governed feelings*. These will enable you to preserve your own equanimity, and to avoid giving disturbance to that of others. *Discrimination* should also be included in the list of requisites, in order to discover what subjects, according to time and circumstances, we should choose or avoid, and the proper moment to talk or to be silent. A monopoliser of conversation is by no means an agreeable appendage to a party. The love of *display* is another trait very unfavourable to conversation, the chief object of which should either be instruction or amusement. Conversation has been compared to a game at ball, at which each player should urge the ball with spirit into its right direction, but never suffer it to rest with him beyond its proper time, or to fall to the ground when any dexterity and skill on his or her part can keep it in play. The improved state of a woman's mind, and the extent of her acquirements, ought

rather to be *inferred* from the conversation than forced or obtruded upon the observation of others.

To speak well, the following rules should be earnestly attended to:—

1. You should be quite as anxious to *talk* with propriety as you are to think, sing, paint, or write according to the most correct rules.

2. Always select words calculated to convey an exact impression of your meaning.

3. Let your articulation be easy, clear, correct in accent, and suited in tone and emphasis to your discourse.

4. Avoid a muttering, mouthing, stuttering, droning, guttural, nasal, or lisping pronunciation.

5. Let your speech be neither too low nor too loud, but adjusted to the ear of your companion. Try to prevent the necessity of any person crying, "What?" "what?"

6. Avoid a loquacious propensity: you should never occupy more than your share of the time, or more than is agreeable to others.

7. Beware of such vulgar interpolations as "You know," "You see," "I'll tell you what."

8. Learn when to use and when to omit the aspirate *h.* (which *see*). This is an indispensable mark of a good education.

9. Pay a strict regard to the rules of grammar, even in private conversation. If you do not understand these rules, learn them, whatever be your age or station.

10. Though you should always speak pleasantly, do not mix your conversation with loud bursts of laughter.

11. Never indulge in uncommon words, or in Latin and French phrases, but choose the best understood terms to express your meaning.

12. Above all, let your conversation be intellectual, graceful, chaste, discreet, edifying, and profitable.

Cookery, Philosophy of.—Of all the arts upon which the physical well-being of man, in his social state, is dependent, none has been more neglected than that of cookery, though none is more important, for it supplies the very fountains of life. The preparation of human food, so as to make it at once wholesome, nutritive, and agreeable to the palate, has hitherto been beset by imaginary difficulties and strong prejudices.

Many persons associate the idea of great wealth with culinary perfection, and thus consider unwholesome, as well as expensive, everything that goes beyond the categories of boiling, roasting, and the gridiron. They are wrong. Wholesome and luxurious cooking is by no means incompatible with limited pecuniary means, whilst in roasted, boiled, and broiled meats, which constitute what is termed true English fare, much that is nutritive and agreeable is often lost for want of skill in preparing them.

Food of every description is wholesome and digestible in proportion as it approaches nearer to the state of complete digestion; or, in other words, to that state termed *chyme*, whence the chyle, or milky juice that afterwards forms blood, is absorbed, and conveyed to the heart. Now, nothing is further from this state than raw meat and raw vegetables. Fire is therefore necessary to soften them and thereby begin that elaboration which is consummated in the stomach. This preparatory process, which forms the cook's art, is more or less perfect in proportion as the aliment is softened, without losing any of its juice or flavour—for flavour is not only an agreeable, but necessary accompaniment to wholesome food. Hence it follows, that meat very much underdone, whether roasted or boiled, is not so wholesome as meat well done, but retaining all its juices. And here comes the necessity for the cook's skill, which is so often at fault, even in these simple modes of preparing human nourishment.

Before we proceed further, we may be allowed to observe, with regard to underdone meat, that fulness and indigestion, attended with numerous other complaints needless here to enumerate, are more or less the especial inflictions borne by those who indulge in it, though such inflictions are invariably attributed to other sources.

Pork, veal, and all young meats, when not thoroughly dressed, are absolute poison to the human stomach; and if half-raw beef and mutton are often eaten with

impunity, it must not be inferred that they are wholesome in their semi-crude state, but only less unwholesome than the former meats.

Vegetables also half-done, which is the state in which they are often sent to table, are productive of great gastric derangement, often of a predisposition to cholera.

A great variety of relishing, nutritive, and even elegant dishes, may be prepared from the most homely materials, which may not only be rendered more nourishing, but be made to go much further in a large family than they usually do.

The great secret of all cookery, except in roasting and broiling, is a judicious use of butter, flour, and herbs, and the application of a very slow fire—for good cooking requires only gentle simmering; fast boiling renders the meat hard. Good roasting can be acquired only by practice; and the perfection lies in dressing the whole joint thoroughly without drying up the juice of any part of it. This is also the case with gridiron meat; whilst a joint under process of boiling as before intimated must be made to simmer gently.

With regard to *made dishes*, as the horrible imitations of French cookery prevalent in England are termed, we must admit that they are very unwholesome. All the juices are boiled out of the meat, which is swimming in a greasy heterogeneous compound, disgusting to the sight, and seasoned so strongly with spices and cayenne pepper, that it would inflame the stomach of an ostrich. French cookery is generally mild in seasoning, and free from grease; it is formed upon the above stated principle of reducing the aliment as near to the state of chyme as possible without injury to its nutritive qualities, rendering it at once easy of digestion and pleasant to the taste.

Corn, Indian.—Indian corn, or maize, is a plant very little known in England, but it is extensively grown in America, Spain, Italy and Egypt. About fifty years ago Cobbett recommended its cultivation as an article of food far superior to the potato in nutritive quality, and far exceeding in produce that of all other corn in quantity. There are many varieties, some of which are more hardy than others, and may be grown in England. The cultivation is easy. The corn should be planted in May; if put into the ground earlier it is liable to be destroyed by frosts. Plant in rows two feet apart, and nine inches between each seed. If grown in the garden instead of the field, it will be advantageous to raise the plants first in a hot-bed, or in a warm border under a frame. This method is desirable, not only on account of forwarding the plants, but also because, when transplanted, the redundant growth is prevented, and the ear is more perfectly matured.

As Cobbett stated, it is very nutritious, and while its cultivation is no longer to be regarded as impossible, all who wish to extend the range of their comforts should give it a much higher place in domestic economy than they have hitherto been willing to do. In the south of Europe it is much used for making bread. In Italy the flour made from it is called "polenta," and many very serviceable dishes are composed of this flour. In America a farinaceous food is prepared from the superior kinds for infants, which is used to keep them free from certain internal complaints to which young children are subject.

Corpulency, To Reduce.—We gather from Mr. Banting the following diet and regimen for reducing too much flesh, and by which he reduced himself from 202 pounds to 156 in twenty days:—For breakfast, four or five ounces of beef, mutton, kidneys, bacon, or cold meat of any kind with the exception of fresh pork; a large cup of tea without sugar or milk, a small biscuit or an ounce weight of toast—no butter. For dinner: five or six ounces of fish (no salmon) or meat (no fresh pork), all kinds of vegetables except potatoes; an ounce of toast, the fruit but not the paste of a tart, poultry, game, two or three glasses of good claret, sherry, or Madeira, but no champagne, port or beer. For tea: two or three ounces of fruit, about an ounce of toast, and a cup of tea without sugar or milk. For supper: three or four ounces of such meat or fish as at dinner, with one or two glasses of claret or sherry. Before going to bed, a glass of claret or sherry. This plan of

Mr. Banting's has been tried again and again with advantage.

Crambo, Game of.—This game is played as follows:—Each player has to write a noun on a small piece of paper and a question on a larger one. All are then thrown together and shuffled, and a question and noun being drawn out, a reply must be given in poetry, in which the noun is introduced. The following may suffice for examples:—

Q.—Are you fond of poetry?

Noun.—Fire.

"Had I the soul of him who once,
In olden time, 'Father of History,' was named,
I'd prove my love, not by mere affirmation,
But by glowing thoughts and words of FIRE
Writ down on the spotless page,
And thus convey my feelings to posterity."

Q.—Define the term "Imagination?"

Noun.—Bridge.

"'Tis like a castle built on high,
A thing without foundation;
A BRIDGE by which we reach the sky,
Is this imagination."

The shorter the reply is, the better; it may be an original impromptu, or a quotation. Those who are clever and quick-witted can make this a very amusing and lively game.

Cramp.—Rolled brimstone held in the palm of the hand has been found to bring immediate relief to persons attacked with cramp in the feet, legs, stomach, or any other part. At such times the brimstone crackles and emits an offensive odour, which is not the case unless the cramp is present. If at all severe at the time, the brimstone as soon as *touched* breaks into pieces; after the same piece has been used several times it is less useful in relieving. To lay it in the palm of the hand is sufficient. It does not relieve the paroxysm by applying it to the *part* in pain from cramp.

Rubbing the *legs* with sweet oil about twice a week is a good preventive from cramp in the calves; but strange to add, this remedy does not answer for any other part than the legs. It is advisable to wear stockings at night after rubbing in the oil, as it soils whatever it touches.

Crape, To Restore.—When a drop of water falls on a black crape veil or collar it leaves a conspicuous white mark. To obliterate this, spread the crape on a table (laying on it a large book or a paper weight to keep it steady), and place underneath the stain a piece of old black silk. With a large camel-hair brush dipped in common ink go over the stain; and then wipe off the ink with a bit of old soft silk. It will dry immediately, and the white mark will be seen no more.

Crape Scarves (China), To Wash.—If the fabric be good, these articles of dress can be washed as frequently as may be required, and no diminution of their beauty will be discoverable, even when the various shades of green have been employed among other colours in the patterns. In cleaning them, make a strong lather of boiling water—suffer it to cool; when cold, or nearly so, wash the scarf quickly and thoroughly; dip it immediately in cold hard water, in which a little salt has been thrown (to preserve the colours), rinse, squeeze, and hang it out to dry in the open air; pin it at its extreme edge to the line, so that it may not in any part be folded together; the more rapidly it dries the clearer it will be.

Croquet.—This now popular outdoor game for ladies and gentlemen was brought over from France, and soon after made its home in Ireland; the materials necessary to play croquet are few, simple, and inexpensive. They consist merely of a mallet for each player, and a wooden ball, with nine or ten iron hoops or arches. These hoops are fixed in the ground at about six or seven feet apart, and the whole art of the game is to knock or croquet the ball through the arches, commencing at one end of the lawn, making the circuit, and returning to the starting-point. A smooth lawn or grass-plat is necessary for the carrying out the game, which may be engaged in by any number; but when only two play, it is advisable for each player to have two balls.

Captain Mayne Reid, who has written the most practical and enthusiastic treatise on the game, says:—"Croquet is the most attractive pastime of the age, while in point of intellectuality, it will dispute the palm with billiards and

whist; perhaps even with that other selfish duality—chess."

With deference to the gallant captain, we do not see how the two games can be compared in any way. For ourselves we see nothing of an intellectual character in croquet. It is a very interesting game, but purely mechanical. The captain continues to say:—

"The quick growth of its popularity—still rapid, and constantly increasing—is proof of the superior attractiveness of the game, and may justify the prediction that it is, at no distant day, destined to become, not only the national sport of England, but the *pastime of the age*."

In another part of his pamphlet the captain says:—"Croquet is a game for the *parterre* rather than the pasture; and as it must needs be played under a hot sun, the shade of the copse should be convenient. In winter, too—*for croquet is a game for all seasons*—the shrubbery affords shelter. The only objection to having the croquet ground within the shrubbery, is a difficulty of there finding a sufficient space of grass-ground surface. Some ornamental shrub or tree is too highly prized to be sacrificed—even to the charming game of croquet! Let such tree stand for the present. The time is not distant when it will be transplanted or cut down ruthlessly and without remorse—yea, flung into the fire as faggots—to make way for this sweet pastime, itself to be cherished as if it were the tree of life!" Is not this overwhelming praise? Yes, indeed—it is *worship*. Our next quotation from the captain's book is equally enthusiastic:—"Though hitherto restricted to the lawn of the lordly mansion, and confined within the palings of the park, croquet will ere long escape from aristocratic keeping, and become equally the property of the paddock and the village-green. Croquet is an innocent amusement—a game of true civilising influence. While deserving every epithet of praise—worthy of being designated the 'king of games,' the 'queen of sports,' or 'the prince of pastimes'—let us hope that it may also become a *pastime of the people*."

Before we append the rules, and for the better understanding of them, we beg to observe that the term croquet is the contact or cannon (to use a technicality in billiards) of one ball with another before passing through the iron hoop; and *rochet*, the striking of two balls with the player's ball.

RULES OF THE GAME.

1. The ball must be pushed or struck with the end of the mallet.

2. The hoop or arch should on no account be moved to afford the player any convenience in playing.

3. After a player has passed the ball through a hoop, he is entitled to a second stroke; or after having roquet to a second ball.

4. The player can only roquet the same ball once, until he again passes through the arch.

5. A ball half through an arch is considered altogether through.

6. If a player miss an arch he must return to the side of it that he played from.

7. A ball must not be lifted from the ground though in the way of another player. Should the ball of one player come in contact with that of another, which is not available for a roquet both balls remain as sent; but if the ball be struck, and available for a roquet, it must be roqued.

8. A ball that has not been through the first arch cannot roquet, but it can be roqued.

9. If a ball that has not passed through the first ring, be sent behind the pin at the starting-point, it can be brought up to the starting-point and begin afresh.

10. On striking the second pin the player has the option of either leaving his ball wherever it may have rolled, or of bringing it back to the starting point.

11. When intending to roquet another ball, the player should strike his own ball with sufficient force to drive the ball about to be roqued into an unfavourable position. The player's ball must always be the one moved in roqueting.

12. If in roqueting the player's ball slip from under his foot when he strikes it, it must be brought back to the place whence he struck it.

Cubic or Solid Measure.

1728 Cubic inches	... =	1 Cubic foot
27 Cubic feet	... =	1 Cubic yard
40 Do. of rough or 50 Do. hewn tmbr.	=	1 Ton or load
42 Cubic ft. of timber	=	1 Shipping ton
108 Cubic feet	... =	1 Stck. of wood
125 Cubic feet	... =	1 Cord of wood

Cupid's Box, Game of.—This very amusing game, invented to compel forfeits, is played in the following manner:—

The one who commences offers a box to his right-hand neighbour, and says, "I sell you my Cupid's box, which contains three phrases—'To love, to kiss, and to dismiss.' The neighbour answers, "Whom do you love?" "Whom do you kiss?" "Whom do you dismiss?" At each of these questions, which are put separately, the person who has given the box names some individual present whom he loves, kisses, or dismisses. The person whom he kisses must in reality kiss him, and the one that he dismisses pays a forfeit. A player may love, kiss, or dismiss several, or even all of those present, but this is permitted only once during the game, a regulation which brings it to a termination.

Curate, Game of.—This game is very useful in giving the young persons engaged in it general ideas concerning the various trades and professions. The order of playing is the following:—One of the company must act the part of the curate, and the remainder must each one select a trade or profession. Then the curate must address one of the company with the words, "I have just come from your house, Mr. Optician, or Madam Dressmaker," (or he may name any one of the trades chosen), "but I did not find you in; where were you?"

Then the person questioned replies, "I was at the tailor's, the hair-dresser's, the jeweller's," &c., naming any one of the trades selected.

The person who has chosen the trade named, instead of replying, "It is not true," inquires, "For what purpose?"—and the other must frame an answer suitable to the trade which he has named.

For example—if he say he has been to the bookseller's, he must answer, "It was to obtain books; but where were you?" The bookseller will then excuse his absence by saying, "I was at the bookbinder's"—who, in his turn, must ask him, "For what purpose?"—when he will reply, "To have some books bound; but where were you?" Then the bookbinder must excuse himself by referring to some other of the trades selected.

A forfeit is due from every player who fails to make an answer suitable to the trades named, or who gives, as a motive for a visit, any reason previously given.

The players may also say that they have been to the curate's, and at his question, "For what purpose?" they must answer, "To be married," or make some reply suitable to a curate's profession; "but where were you?"—and the curate is also obliged to make an answer that suits the trade of that one of the company whom he says he was visiting.

Cushion Dance.—This once favourite game appears to be of some antiquity, for we find mention of it in a book published in 1698. The game, or dance, still prevails amongst the humbler classes in Northamptonshire. Miss Baker, in her "Glossary of Northamptonshire Words and Phrases," thus describes it—

"One of the young men endeavours secretly to bring in a cushion, and locks the door, to prevent the escape of the young maidens; then all the party unite hands, and dance round three times to the left and three times to the right; after which the company all seat themselves, except the young man who holds the cushion. He advances to the fiddler, and says—

"'This dance it will no further go.'

"*Fiddler.*—'Why say you so, why say you so?'

"*Cushion-holder.*—'Because the young women will not come to.'

"*Fiddler.*—'They must come to, they shall come to, and tell them I say so.'

"The cushion-holder then goes to the girl he fancies most, and drops the cushion at her feet; she kneels down with him on the cushion, and he salutes

her, and they then rise and dance round and round to the fiddler. The young woman then addresses the fiddler:—

"'This dance it will no further go.'

"*Fiddler.*—'Why say you so, why say you so?'

"*Woman.*—'Because the young men will not come to.'

"*Fiddler.*—'They must come to, they shall come to,' &c. She then goes to any young man she fancies, he kneels with her on the cushion, and they kiss each other, and dance round and round, as before, to the fiddler. The person last kissed then holds the same dialogue with the fiddler, and takes the cushion to another young woman, and so on, until the whole company have gone through the same ceremony, which concludes with all dancing round three times, as at the commencement."

Custards, General Directions for Making.—To make very excellent custards, take a pint and a half of milk, and half a pint of cream, and put it on the fire in a clean and well-tinned stewpan. When it boils, add a piece of lemon peel, a couple of peach leaves, about as much salt as will cover a sixpence, and two ounces, or more if necessary, of the best pounded loaf sugar. Let the milk simmer until it has acquired the flavour of the orange peel and peach leaves, but keep stirring it all the while, otherwise it will burn. Use nothing but a wooden spoon for stirring. Have the yolks of eight eggs ready beaten up; put them into the milk and stir the whole over the fire until the custard is thick enough; but take care that it does not boil, or the heat become too great, otherwise it will curdle, and the whole be spoiled. Instead of putting peach leaves into the milk you may add to the custard, after it is taken off the fire, a few drops of the almond flavour sold by chemists. When the custard is cold, it may be put into custard glasses.

If you wish the custards to appear in another form, put the custard glasses, when full, into a large stewpan, with sufficient hot water in it to reach half way up the glasses; cover each glass with a bit of parchment tied round the rim, to keep the steam from falling into them. Let the water boil gently over the fire, keeping the vessel uncovered, until the custards acquire more consistency, and a thin crust is formed on the top of them. Then take them out and let them cool. The same kind of custards may also be put into cups and baked in a slack oven. (See *Adulterations.*)

"Cut a Dido."—The origin of this phrase is quite curious. It is told in history that Dido, a queen of Tyre, about 870 years before Christ, fled from that place after the murder of her husband, and with a colony settled on the north coast of Africa, where she built Carthage. Being in want of land, she bargained with the natives for as much as she could surround with a bull's hide. Having made this agreement, she cut the bull's hide into thin strings, and tying them together, claimed as much land as she could surround with the long line she had thus made. The natives allowed the cunning queen to have her way; but when anybody played off a sharp trick, they said he had "Cut a Dido," and the phrase has come down to the present day.

Dace, Dart, or Dare.—It is necessary in angling for dace to remain in concealment as much as possible. They spawn in February or March, and their flesh is but inferior in point of flavour. They are a very active and cautious fish, and rise to a fly, either natural or artificial. They frequent gravelly, clayey, and sandy bottoms, leaves of the water-lily, and deep holes, if well shaded. In sultry weather, they are frequently caught in the shallows, and during that period are best taken with grasshoppers or gentles. In fishing at bottom for roach and dace, which are similar in their haunts and disposition, bread soaked in water and kneaded to a good consistency, and then made up together with bran into round balls, and thrown into the place where it is proposed to angle, will be found very serviceable, but must always be thrown up the stream. There is a mode of intoxicating dace, and by this means rendering them an easy prey; but this is no part of the real angler's sport. The Thames is well known to abound in dace, and the

grayling of the Mersey is thought to be a variety of the same species.

Deal Wood.—Deal is the wood of the fir-tree, which is chiefly brought from Sweden, Norway, and other northern European countries. The most common species of fir-trees are the silver-leafed, and the pitch, Norway, or spruce fir. The first of these grows in many parts of Germany, from whence turpentine is sent to England. The Norway fir produces the white deal commonly used by carpenters; from this pitch is also drawn—whence it takes its second name of the pitch-fir. There is also the red deal, which is very much used where great durability is wanted, not having been deprived of its turpentine as the white deal has.

Deaths, Registration of.—Intimation of deaths should be given in the same manner as births (which *see*). This should be done early, as the minister who reads the funeral service may refuse to bury the body if the certificate be not produced.

Decalcomanie.—This art consists in a mode of decorating the panels of rooms, chair coverings, cloth, linen, silks, metals, and, indeed, almost all kinds of solid or opaque surfaces. It is effected by means of transferring. There must be, as in all fancy arts, a storehouse of little aids for facilitating the work—designs printed on paper, bottles of cement, varnish, finishing varnish and detergent liquid, a roller, a few camel-hair brushes or pencils, a piece of cloth or leather, a sponge, an ivory knife, a pair of pincers, and a pair of scissors—all of which can be obtained in convenient boxes from Messrs. Barnard and Son, 339, Oxford Street.

The designs are printed on paper, so prepared that after the coloured surface has been cemented down upon wood, cloth, metal, &c., by means of varnish, the colours become transferred from the one surface to the other.

The art is, in principle, diaphanie, applied to an opaque instead of a transparent substance, with certain changes in plan and procedure depending on this difference. There are two kinds or classes of designs prepared and sold for this purpose: one, intended to appear like ordinary pictures, is for applying to light-coloured surfaces, such as white wood, china, paper, &c.; the other, intended to present a kind of lustre or metallic hue, is for application to dark grounds, such as rosewood, japanned ware, brown or black woven fabrics, &c. The designs may be chosen *ad libitum;* flowers, birds, figures, landscapes, imitations of Sevres porcelain, Chinese and other vase patterns, imitations of beautifully-veined woods, arabesque or renaissance ornaments—anything is available, provided it is properly printed in colours; although in this, as in other things, good taste will produce wonders out of very slight materials.

We may now watch the lady artist at her work. Let us say that a white earthenware or porcelain plate is to have a picture transferred to it. The selected design is cut with scissors nearly to the proper size and shape, and is well coated with varnish by means of a sable-hair pencil, every portion of the design receiving its due quota. The paper is not made use of immediately, but is allowed to remain a minute or two until the varnish becomes slightly sticky to the fingers. The paper is then laid face downwards upon the plate in its proper position; a piece of cloth or leather, damp, but not actually wet, is laid upon it, and is pressed or rubbed down carefully, either with a roller or an ivory knife. The back of the paper is next moistened and allowed to remain for a minute or two, by which time the paper itself is removed from the plate, leaving the colours of the device behind, as well as the varnish. This removal is effected either by the fingers only, or with the aid of pincers. The porcelain or earthenware plate, with the design thus transferred to its surface, is next washed carefully with water and a camel-hair brush, to remove spots and irregularities. When finally dried, a coat of varnish secures the whole work, and the fair artist has a pictorial dinner-plate at her disposal.

If, instead of a hard surface of porcelain or earthenware, the transfer is made to a surface of silk, or other soft

material, the process is slightly modified. The silk is laid down on a piece of clean paper, the picture laid upon it, face downwards, and the damping and pressing effected. Or else, as a more effective method in some cases, the face of the picture is coated with varnish, and the back is floated on the surface of warm water in a flat vessel; in the course of a few minutes the picture is carefully lifted up, the superfluous moisture is absorbed by application of a sponge, the wet varnished surface is laid down on the silk, and in a very short time the paper may be pulled away, leaving the colour and the varnish behind it.

A learned professor of this art tells his lady pupils that "white biscuit china vases are very ornamental articles to work upon; and glass potiche vases, being coloured in the inside white, green, blue, or any other colour, make very handsome ornaments when decorated. Also tea and coffee services of white earthenware or china; white wood articles, such as screens, card-cases, and boxes; straw dinner-mats, pieces of silk or cloth, slippers, hand-screens, sofa-cushions, scent-bags, ribbons, articles in ivory or wood; indeed, it is difficult to say what ornamental article may not be thus decorated, from the panel of a room to the tiny articles upon the dressing-table. If you can paint in oil or water-colours, sometimes the finished work may, by a few judicious touches with the appropriate colours, be improved; but it is never absolutely necessary, unless the work has been inexpertly performed." He is so enthusiastic in the matter that he would "have every lady her own house decorator." (See *Diaphanie.*)

Descriptions, Game of.—Before commencing the game, the gentlemen and ladies, in equal number, proceed separately to choose an umpire—the ladies, a lady; the gentlemen, a gentleman.

The players then range themselves in a single line, the ladies occupying the right wing, and the gentlemen the left. A table furnished with writing materials is placed at each extremity of the line, before which the umpires take their seats, provided with everything necessary to the progress of the game. Then they draw up separately a series of questions, disposed in triplets, or a number equal to the number of couples that compose the company.

For the Ladies.

If I should decide to have a lover, I should wish him to have his—

First Lady.—Hair, eyebrows, complexion.

Second Lady.—Forehead, nose, mouth.

Third Lady.—Eyes, cheeks, ears.

Fourth Lady.—Mouth, teeth, neck.

Fifth Lady.—Chest, shoulders, height.

Sixth Lady.—Arms, hands, nails.

Seventh Lady.—Knees, legs, feet.

For the Gentlemen.

If I should decide to make love to a lady, to please me she must have her—

First Gentleman.—Waist, countenance, voice.

Second Gentleman.—Birth, fortune, talents.

Third Gentleman.—Character, heart, mind.

Fourth Gentleman.—Sight, hearing, smelling.

Fifth Gentleman.—Touch, taste, carriage.

Sixth Gentleman.—Sleep, appetite, memory.

Seventh Gentleman.—Health, fashion, disposition.

These series of questions are more or less numerous, according to the number of the players.

When they are all written down on either side, the female umpire addresses the lady nearest to her to fill up the blanks opposite the three parts of the first series. We will suppose that she writes—

After hair—*Brown.*

After eyebrows—*Grey.*

After complexion—*Olive.*

The players must be careful not to repeat the same word in the same series of questions; for instance, *brown* hair, *brown* eyebrows; in this case a forfeit must be paid.

The second lady replies by filling up the blanks to the second series of questions, and so on with the rest.

In the meanwhile the male umpire addresses the gentleman nearest to him,

and requests him in the same manner to write his preferences opposite the series of questions which he has drawn up for him. We will suppose that the latter writes—

After waist—*Moderate.*
After countenance—*Open.*
After voice—*Harsh.*

The rest write in the same way, according to their tastes, opposite the questions proposed to them.

When all are filled up, the female umpire proposes to the first gentleman the question put to the first lady, by saying—

"If you intended to select a sweetheart, of what colour would you choose to have

Her hair?—*Blonde*
Her eyebrows?—*Red.*
Her complexion?—*Olive.*

The unfortunate gentleman who by chance prefers the same colour or other quality which one of the ladies may have written in her answer, can only redeem his fault by paying a forfeit.

The umpire writes down the answers given, then returning to the first lady, she asks her for the reason of her preference, article by article, and makes a note of these also; she then returns to the gentleman, and inquires for his reasons, which must be different from those of the lady.

The umpire on the gentlemen's side then follows the same course towards the ladies, questioning them one after the other, as to their preference regarding the question proposed to the gentleman whose place in the line corresponds with theirs. Then he demands the reasons for their preference from each; and so on, until all the questions have been discussed.

Dew.—Who does not admire the bright crystal drops that in the early morning glisten and sparkle on every leaf and flower and every blade of grass? Dew is, indeed, part of the life of these tender nurslings of the earth. Yet few persons, perhaps, consider its importance apart from the charm it adds to the aspect of nature, and still fewer reflect on its origin.

The vapour of the air is condensed into dew by coming in contact with substances colder than itself. After sunset the warm earth radiates its heat into the air, and the surrounding vapour becomes chilled by contact with the cold surface, and settles on it in clear liquid drops. This occurs only when the night is fine, and free from clouds; for at such times there is nothing to prevent the radiation of heat from the ground, whilst clouds act as an obstruction to the heat, consequently on a cloudy night no dew falls.

Dew is always more plentiful in open situations, where there are no houses or trees to check the escape of the heated air; while, on the other hand, the ground beneath a tree in full foliage remains dry.

It is a wise adaptation of Providence that those things which require most moisture radiate heat most freely, and collect the largest quantity of dew; grass, vegetables, and the leaves of plants, which are dependent upon it for sustenance, part with their warmth rapidly and abundantly, while polished metal and smooth stones are bad radiators of heat.

In all cultivated ground, also, a large supply of dew is yielded, for loose soil readily throws off its warmth, and the genial moisture sinks down to nourish the seeds and roots lying embosomed in the earth. How little we consider the wise arrangement of these trifles!

On a gusty night the wind evaporates the dew as it falls, and in the morning the flowers are disappointed of their fresh glittering ornaments. But they may hope for them again: whether with dew-drops or showers of "gracious rain," they *will* be nourished and refreshed as often as they need it; for in the rule of this most beautiful world, no flower or leaf, no blade of grass, is ever overlooked—each is provided with the exact quantity of moisture necessary to its existence.

Diamond, The.—The diamond, when found, is covered with a thin crust, which greatly conceals its beauty to an unpractised eye; but this is easily removed, and the regular octahedron form is cut either into that of a rose-diamond or a brilliant, as its manufacturer may choose. The value of a diamond depends both on its weight and colour; the former is ascertained by carats—a weight equal to four grains. With regard to the latter,

the colourless stones are the most valuable, next the red, blue, and black varieties, and lastly the light-coloured ones.

Diamonds have been found in the East Indies, principally in the kingdoms of Golconda, Visapour, Bengal, and in the island of Borneo. One of the best diamond mines is that of Gani, or Colore, and as many as 60,000 people—men, women, and children—have been at work there at one time.

When the miners have found a place fit for digging, they level a spot close by, somewhat larger, and enclose it with walls about two feet high. After a few superstitious ceremonies, and a kind of feast which the master of the mines gives to the workpeople, every one goes to his business—the men digging in the place first fixed on, the women and children carrying the soil off to the spot walled round; the usual depth of these pits is from twelve to fourteen feet. When the earth is all removed, it is well washed and dried, then sifted carefully in a kind of open sieve or riddle, threshed, and sifted again; lastly, it is searched with the hands to find the diamonds. There are also rich diamond mines in Brazil and in South Africa.

The largest and most valuable diamond is that known as the Koh-i-noor, or fountain of light. It formerly belonged to Runjeet Singh, but is now the property of her Majesty. The worth of this jewel is said to be about £2,000,000.

There have been larger diamonds in existence; we will quote some of the most remarkable. Tavernier mentions one which formerly belonged to the emperor of the Moguls, which in its rough state weighed 900 carats. It was found in the Golconda mine about the year 1550, and is of the size of a hen's egg, divided through the middle in the direction of its smallest diameter. Among the crown jewels of Russia is a diamond weighing 195 carats; it is of the size of a pigeon's egg, and was formerly the eye of the Brahminical idol Sheringham. It was stolen thence by a French soldier, who deserted into the Malabar service, and found means of purloining the gem. He escaped with it to Madras, where he disposed of it for £2,000 to the captain of a ship, who afterwards sold it to a Jew for just six times that amount. The Jew subsequently disposed of it to the Empress Catherine for £90,000 in ready money, and an annuity of £4,000.

Diamonds increase in value as they increase in weight; that is to say, a diamond weighing three carats is worth £72; one weighing four carats, £126; five carats, £200; ten carats, £800; and one hundred carats, £80,000. Beyond this weight, their value cannot be calculated, as there is great difficulty in selling them; in fact, the value put on them is almost nominal.

The diamond is highly indestructible, the strongest acids and alkalies producing no effect on it. It can even bear the most intense heat in a closed vessel without sustaining any injury or perceptible change. Nevertheless, it is in a high degree combustible, and when heated in the open air it may be entirely consumed.

Diaphanie.—This art for ladies is a very tasteful one. It is a mode of imitating stained glass, easily performed at small cost, as the sellers of the apparatus inform us. The glass itself is real; the colours and the mode of colouring are the only new things in the art. The materials, which may all be purchased at Barnard and Sons, Oxford Street, comprise designs, a roller, some transferring varnish, washable varnish, cleansing liquid, and a few brushes.

As stained glass is generally a mediæval or antiquated sort of product in regard to the device or design, so does this new diaphanie follow in the same track. Messrs. Barnard and Son have caused sheets of designs to be drawn and lithographed in great number and variety; representing such subjects as "The Crucifixion," "The Nativity," "The Madonna," "The Four Seasons," "Knights in Armour," "The Boar Hunt," "Peace and War," "The Months of the Year," "Elizabeth and Mary," "The Last Supper," and such ornamental accessories as groundings, borders, flower groups, coats of arms, medallions, shields, scrolls, wheel patterns, renaissance devices, and designs to imitate lace, floral and geometrical patterns, for engraved glass. All these

are printed in colours. In addition, there are coloured sheets of blue, green, orange, yellow, sepia, and crimson; and tinfoil for leadwork. Thus the lady artist can provide herself with designs suitable for church, hall, conservatory, or staircase windows. Common sheet glass, flat, and free from specks, is good enough for the purpose.

The philosophy of the whole process is to transfer the colours from the paper to the glass; and all the arrangements are made subservient to this end.

There is in most cases a good deal of cutting out necessary, in order that the coloured ground, the main subject, and the subordinate ornaments may all fall into their proper places. It is effected partly in accordance to the taste of the artist. When ready for use, the glass, well cleaned, is laid down upon a soft cloth, the paper is damped on the back with sponge and cold water, and the face, or coloured surface, is quickly coated with a layer of transfer varnish prepared for the purpose by means of a flat camel-hair brush. The paper is then applied, face downwards, upon the glass, and pressed with a roller from the centre towards the edges, in such a manner as to press out the superfluous varnish and any air-bubbles. The back of the paper is kept well damped during the pressing. The paper is then left until perfectly dry, which takes from one to three days to complete. It will at once be inferred that the colours used in printing the designs, and the transfer-varnish applied by the brush, have a special relation to each other; insomuch that the colours are not only transferred to the glass, but are cemented to it by the varnish. By wetting the paper again, and rubbing it with a cloth or with the hand, the paper may be wholly removed from the glass, leaving the colours and varnish behind. The paper thus got rid of, the glass receives a thin coating of clearing liquid, and also one or two of washable varnish, applied with flat camel-hair brushes. If any of the colours are not rich enough, or if any scratches or blemishes appear, the glass requires to be painted at those spots with special colours, mixed with copal varnish.

Diaries, Importance of.—We highly recommend the practice of keeping a diary of the events of the day, personal and public. Its use as a remembrancer is obvious. A good memory is not everybody's property, but a diary, which is often an efficient substitute, is within the reach of all, and if regularly written up each evening or morning, demands but little time or trouble. The entry in a diary is authoritative where a mere recollection might be disputed; and we believe it is admitted as evidence in law, as we sometimes read of cases in which an appeal is made to its pages. When some years have passed, with the changes that time never fails to bring, there is a peculiar pleasure in looking over the leaves of an old diary, recalling scenes and incidents which had nearly passed from the memory, but which spring again into being as we glance over the record. However slender the outline, it serves to recall the events, and memory finds then little difficulty in filling up the sketch. It may be, indeed, that there is something sad in many of these resuscitations, but it is undoubtedly true that there is a pleasure in sadness where the cause is remote, where the degree is slight, and where it can be dismissed from the mind if desired.

But besides being a record of events useful for reference and interesting to look back upon, there is another benefit in keeping a diary, and that is the influence it exercises over one's daily doings. If it faithfully record, as it should, whatever we do, it is often a salutary check upon our actions to remember that they must be set down that evening in black and white. The sense of waste of time is rarely stronger than when, pen in hand, we can recall nothing worthy of record amongst the occupations of the day.

Diet.—See *Adulterations*.

Digestion.—There is nothing more wonderful in the whole economy of man's physical organisation than the power of digestion. With all his inventive subtlety, man will perhaps never discover how to prepare the food before it is eaten, so as to fit it for passing through the stomach immediately to supply the many

purposes for which Nature wants it in the body. And even if he could accomplish this the discovery would only be useful in sickness: for in health the stomach digests the eaten food it receives without a thought or a voluntary effort on our part. Indeed, food cannot be prevented from digesting if placed in an empty, healthy stomach, unless we take violent exercise, or drink much spirits.

Perhaps the best, at least the most generally understood chemical experiment for clearly showing the process of digestion is that of pouring a little water on a piece of quick lime, in a mortar or a basin of stoneware. The lime immediately begins to absorb the water, and from being a solid, hard stone, is soon melted down into a soft, pulpy substance —the lime and the water forming a new kind of matter for useful purposes, which neither could have served of itself. So the gastric juice dissolves the eaten food into a soft, pulpy, greyish-coloured paste, and the two substances thus form a new combination of matter, called *chyme*.

A meal is thus gradually changed, and as soon as any portion of it is reduced to this state, it is ready for Nature's use, and is immediately taken and employed by this unerring architect for numerous purposes. Should too much food be taken at one meal, the gastric juice cannot flow so freely as it ought to do, from the vessels which supply it being partly stopped up and overstrained by the pressure of too large a quantity of food.

If too little food be taken, and especially if the stomach remain empty too long, the gastric juice loses much of its digestive power, from not being drawn off in the usual manner, and Nature is also enfeebled for want of due nourishment. Hastily and imperfectly eaten food is far more difficult to digest than if it had been bruised and broken down very well by the teeth, as the gastric juice cannot get so easily to every particle.

In perfect health, violent exercise after eating is hurtful. Cheerful conversation, especially if it come from the gladness of the heart, and not from the exciting influence of mischievous drinks, is much in favour of digestion. Probably, the gastric juice can get access more freely to every particle of food from the peculiar motion of the stomach during a joyous laugh. Invalids may also promote digestion by placing themselves in a reclining position on their backs; but care should be taken not to fall asleep for some time after eating, as that hinders or stops digestion.

Farinaceous, fruit, and vegetable food digest in rather less time than flesh, and a well masticated meal much sooner than one that has not been broken down by the teeth sufficiently. The gastric juice has a great deal more power in some people than in others; and even in the same stomach, at different times. The skins of fruit, especially dried foreign fruit, are sometimes little altered by its action, while at other times it appears completely to have dissolved them.

Much of the knowledge man possesses of the peculiar economy and operations of the stomach has been acquired during the present century. Dr. Beaumont, of America, has contributed to this, perhaps, more than any other individual, by the publication, in 1853, of the results of his numerous and long-continued experiments on the stomach and gastric juice of a living man who had been shot in the stomach. The lacerated coats of the stomach adhered themselves to the lips of the outer wound in healing, leaving an aperture into it through which anything of a suitable size could be introduced and taken out, and the process of assimilation observed.

Diphtheria.—This name was given to the disease on account of its tendency to form false membranes over the parts affected, which are the bronchial and respiratory passages. The progress of the disease is very rapid, and it commonly causes death by suffocation. A Mr. McDonald, who appears to have had considerable experience in diphtheria, says, "The best line of action, I find, is as follows:—After a clearance of the bowels with calomel and rhubarb, I order strong beef tea, wine, and, above all, Bass's pale ale; the patients express themselves much relieved in the throat as it is swallowed, and feel greatly exhilira-

after taking it. The medicine I find of most use is an ounce of the compound tincture of quinine, taken in wine and water, every four hours. As a local application (and it is by the personal inspection of the throat, and the personal use of the applications, that we may hope to benefit the sufferer), I find the best and most efficacious is equal parts of honey and concentrated muriatic acid, applied with a probang to the whole of the false membrane, about every sixth hour. As a gargle, borax and honey, mixed with a little brandy and water, is very useful; and, after the stripping off of the false membranes, a gargle made with tannic acid and water affords great comfort."

Disinfectants.—Vinegar boiled with myrrh or camphor, and sprinkled in a sick room, will keep it sweet and free from unhealthy effluvia.

Lime thrown into bins, sewers, water-closets, &c., destroys offensive smells.

Chloride of lime left standing in an earthen vessel will keep places and rooms sweet that are liable to be disagreeable to the smell.

When meat is tainted the taint may be removed by covering it a few hours with common charcoal, or by putting a few pieces of charcoal into the water in which the tainted meat is boiled. Bed-rooms, sitting-rooms, stables, and outhouses, should occasionally be washed with lime-white, because the lime being very caustic, removes all organic matter adhering to the walls.

A small piece of rosin dipped in the water which is placed in a vessel on a stove, will add a peculiar property to the atmosphere of the room, which will give great relief to persons troubled with a cough. The heat of the water is sufficient to throw off the aroma of the rosin, and gives the same relief that is afforded by a combustion of the rosin. It is preferable to combustion, because the evaporation is more durable. The same rosin may be used for weeks.

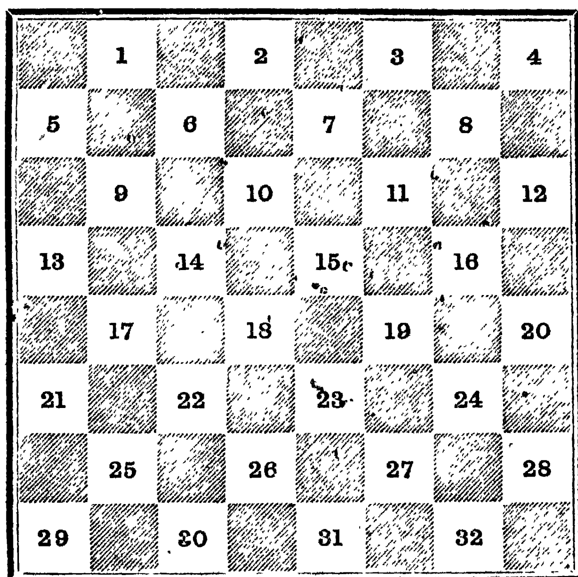
Divorce and Probate Court, Statistics of.—The returns of the proceedings in Her Majesty's Court for Divorces and Matrimonial Causes show that in 1870, 382 petitions were filed, being seven more than in 1869. Besides these there were six petitions for protection of property and 80 for alimony, as against 17 and 85 in 1869. There were 835 motions, 828 summonses, and 284 causes tried. Judgment was given in 274 cases. During the 13 years the jurisdiction of the court has been in existence the total number of the petitions filed has been 4155. There were four applications during the year 1870 for a new trial, four appeals to the Full Court, 41 petitions to vary settlements, 220 decrees *nisi* and 154 absolute, 22 decrees for judicial separation, five for restitution of conjugal rights, and nine for nullity of marriage.

In the Court of Probate the number of probates granted was 13,177, and of administrations 5031; in 1869 there were 9870 probates and 4804 administrations. The total amount of stamps issued in London for probates and administrations was £934,079, as against £937,000 in the previous year. In the district registers, of which there are 40, there were in 1870, 16,839 probates and 7075 administrations granted, and in 1869 there were 16,279 probates and 7087 administrations. The amount of fees received in the district registers was £17,559 in 1870, and £9,492 in 1869. The amount of stamp duty was £712,963 in 1870, and £625,215 in the preceding year. The business of the Court of Probate continues to increase according to the increase of the property of the country. In the Ecclesiastical Courts there were 13 suits in 1870, as against 38 in 1869, 21 in 1867, and 16 in 1866. Further, there were 169 suits for Faculties, of which 165 were decided and one refused; three were still pending.

Dolls.—Victor Hugo observes—"A doll is one of the imperious wants, and at the same time one of the most delicious instincts, of feminine childhood. To clean, clothe, adorn, dress, undress, dress again, teach, scold a little, nurse, lull, send to sleep, and imagine something is somebody—the whole future of a woman is contained in this. While dreaming and prattling, making little trousseaux and cradles, while sewing little frocks and aprons, the child becomes a girl, the girl becomes a maiden, and the maiden

becomes a woman. The first child is a continuation of the last doll. A little girl without a doll is nearly as unhappy, and quite as impossible, as a wife without children."

Domestic Character, A.—Dr. Hunter thus sums up the *beau-ideal* of a domestic character:—"To be a good manager, without an ostentatious display of it. To be elegantly neat, without being a slave to dress or furniture. Everything to stand in its right place. To be easy and affable with your servants, and to allow of no scolding in the kitchen or servants'-hall. The family business to go on as regularly as a good clock, that keeps time without being set always faster or slower. Every one to look easy and contented, and the housework to be done with regularity. To keep a good and plentiful table, but not covered with incitements to gluttony. Let the food be plain, and in season, and sent up well dressed. When company is asked, a few well-chosen luxuries may be introduced. This is the criterion of a small but well-regulated family."



Draughts.—This is a very popular game with the young, and certainly a very interesting one, and also requires some skill to play it successfully. It is of much less antiquity than chess. The French call it *Les Dames*, from having been a favourite with ladies; and in Scotland this signification is preserved in the term *dam-brod*, the name universally applied by the common people to the draught-board.

The game is played by two persons, who sit opposite each other. Each party has a set of twelve men, the colour of each being different, usually black and white.

Draughts is played on a chess-board, with thirty-two squares each, black and white, or red and black. The board, however, is placed before the players differently to that when chess is played; in the latter game (*see* CHESS) there must be a white square in the right-hand corner, but in draughts the right-hand corner must be black—that is, supposing you to play on the white squares.

The diagram on the preceding page is a representation of a draught-board, numbered for the sake of illustration, and placed as it should be in playing.

The men may be placed either on the white or black squares, but each player must have his men placed on the same colour. It is most general in England to place all the men upon the white, and to have a black square on the right. In Scotland the black squares are played upon, when there is, of course, a white square to the right.

The movements in draughts are very simple; a man can move only one square at a time, and diagonally, never straightforward or sideways. If an enemy's man stand in the way, no move can take place, unless there is a vacant square beyond into which the piece can be lifted. In this case the man leaped over is removed from the board.

The important purpose of the game is to clear the board of the enemy's men, or to hem them in so that they cannot move; and whichever player does so first wins the game.

As no piece can move more than one step, diagonally, at a time, there can be no taking till the two antagonists come to close quarters; and the forcing them cautiously into each other's neighbourhood is the chief art of the game.

When the men on either side have cleared the way by taking, or found an open path to the opposite side of the board, they become invested with another power of movement; by reaching the first row of squares on the opposite side, the man is entitled to be *crowned*, which is done by placing a man on the top of it. Thus crowned, the man may move backward or forward, but always diagonally, and one square at a time, as before. This power of moving, and taking either forward or backward, renders it of consequence to get men crowned; and if two or three on each side gain this advantage the game may speedily be decided.

After crowning, great art is shown in blocking up one or more of your adversary's men, by the aid of which to accomplish a series of decisive moves. For example, supposing you have detained your adversary's piece at 4 while he has others situated on 25 and 26, and supposing you have pieces on 12 and 19, with a crowned man at 14, you may, by giving him your 12 and 19, exchange two pieces for three, which is commonly equivalent to victory in the game. Again, supposing you have men on 13, 22, 30, and a crowned one on 26, and your adversary a piece on 5, with others scattered in the direction of 16, 8, 7, you may, by successively pushing before him your pieces on 13 and 22, gain a formidable change.

In beginning to play, much depends on having the first move, and the rule is, that in playing several games, each party takes the first move alternately.

If a player touch one of his men, he must play it. If a player omit to take a man when it is in his power to do so, his adversary can either *huff* him—that is, take the man—or insist upon his own man being taken. The practice is to lift the man which ought to have taken yours.

N.	C.	F.	T.	N.	C	F.	T.
1	B	11	15	28	W	30	25
2	W	22	18	29	B	29	22
3	B	15	22	30	W	26	17
4	W	25	18	31	B	11	15
5	B	8	11	32	W	20	16
6	W	29	25	33	B	15	18
7	B	4	8	34	W	24	20
8	W	25	22	35	B	18	27
9	B	12	16	36	W	31	24
10	W	24	20	37	B	14	18
11	B	10	15	38	W	16	11
12	W	27	24	39	B	7	16
13	B	16	19	40	W	20	11
14	W	23	16	41	B	18	23
15	B	15	19	42	W	11	8
16	W	24	15	43	B	23	27
17	B	9	14	44	W	8	4
18	W	18	9	45	B	27	31
19	B	11	25	46	W	4	8
20	W	32	27	47	B	31	27
21	B	5	14	48	W	24	20
22	W	27	23	49	B	27	23
23	B	6	10	50	W	8	11
24	W	16	12	51	B	23	18
25	B	8	11	52	W	11	8
26	W	28	24	53	B	18	15
27	B	25	29	&c.	W	loses.	

In the table on page 95, is an example of playing a game, in which white loses. The letters on the columns of the table referred to (N., C., F., T.), signify *Number*, *Colour*, *From*, *To*.

A single false step in draughts often leads to irretrievable ruin; and it is only after long experience in impressing on the mind what would be the result of particular movements, that proficiency is attained.

Drawing-Room, Arrangement of.—Morning visitors are generally received in the drawing-room. To preserve the apartment neat and to exhibit good taste in its decorations and the arrangement of its furniture, is of some importance to the young mistress of a family. From these, strangers are apt to form an opinion of the character of its proprietor. The drawing-room is that part of a private house in which decorations and embellishments are most in place. It is there the graces of social intercourse are chiefly displayed; where Learning relaxing from his gravity of feature, pleasantly throws aside his gown and trencher, and Wisdom, with the affability of benevolence, mingles in the amusements and shares the feelings of the young, the gay, and the lovely. Everything, therefore, in the drawing-room should be light and elegant; mirrors are here in character, and bouquets and flowering plants. The drawing-room should not be converted into a fancy bazaar or toy-shop for the display of a thousand fanciful ornaments, as old china, glass baskets, Spanish toys, flowers made of rice and wax, and other trifles. A more rational source of amusement both for the visitants and inmates of the drawing-room may be derived from selections from the literature of the day, or from the works of some of the best authors. In the arrangement of the drawing-room for receiving morning visitors, the couches and chairs should be placed so as to facilitate the colloquial intercourse of the visitors without the necessity of a servant entering the room to place them. Ease, not carelessness, should predominate. Plants and flowers are pleasing ornaments in a drawing-room, and give an exercise for taste in their choice and arrangement. Though it may not be necessary for a lady to be a botanist or a naturalist, yet she ought not to be ignorant of the names and characters of the flowers that adorn the apartment. To learn their names, something of their natural history, and (if they are exotics) of their native soil, is soon done, and such slight knowledge often promotes conversation between those who, from slight acquaintance, have with each other few subjects in common, and between whom, conversation, in consequence, flags and becomes heavy. Occupations of drawing, music, and reading, should be suspended on the entrance of morning visitors. But if a lady be engaged in light needle-work—and none other is appropriate to the drawing-room—it promotes ease, and it is not inconsistent with good manners to continue it during conversation; particularly if the visit be protracted, or the visitors be gentlemen. It was formerly the custom to see visitors to the door on taking leave, but this is now out of fashion. The lady of the house merely rises from her seat, shakes hands, or curtseys, according as her intimacy is with the parties, and then ringing the bell to summon a servant to attend them, leaves them to find their way out of the house. Neither is it necessary for a lady to advance to the door to receive her company, who are expected to make their way to her, unless, indeed, great age, or marked superiority of rank require, according to the usages of society, a greater degree of attention. It is the duty of every mistress to see that her servants understand and fulfil what is requisite for the good order of her house and the comfort of her visitors.

Dreams.—"Dreaming" (we quote from *The Family Doctor*) "is the occupation of the mind during sleep by a series of thoughts, or train of ideas, or a wakeful and active condition of some of the faculties of the mind, while others are perfectly dormant. In a psychological, or, to speak more plainly, a mental point of view, this is an extremely interesting subject; but we have only here to do with it as far as the body is concerned. Of the great influence exercised by the body, in its several states and conditions,

over the mind; we need no stronger proof than is afforded by the phenomena of dreams, the cause of which may be commonly traced to some functional derangement or other; thus, from indigestion comes nightmare—and all who have had anything to do with children know full well that disturbing dreams are common indications of disorder of the bowels and stomach; so, organic disease, such as that of the heart—or anything which causes oppression at the chest—will frequently give rise to incubus, and visions of a distressing character, as also will a blister, or aught which occasions painful and uneasy sensations of the body. When children are much given to dreaming, they are generally troubled with worms, or some visceral obstruction; and one or two smart purgatives will often relieve the symptoms. When dreaming is the result of great mental labour or excitement during the day, a temporary relaxation, with more physical exertion, may be recommended, and the use of the shower-bath, or anything that will divert the thoughts and brace and energize the system."

Dress.—No one should infer that indifference to dress is an evidence of humility. In many cases it is the veil of silly pride and defiance of general opinion. Some poet, in homely verse, has conveyed very wholesome ideas on this subject. He writes:—

"The outward forms the inner man reveal;
We guess the pulp before we cut the peel.
One single precept might the whole condense—
Be sure your tailor is a man of sense;
But add a little care or decent pride,
And always err upon the sober side.
Wear seemly gloves; not black, nor yet too light,
And, least of all, the pair that once was white.
Virtue may flourish in an old cravat,
But men and nature scorn the shocking hat.
Be shy of breast-pins; plain, well-iron'd, white,
With small pearl-buttons—two of them in sight—
Is always genuine, while your gems may pass,
Although real diamonds, for ignoble glass."

Elegant dress is not found in expense; money, without judgment, may load, but can never adorn. You may show profusion, without grace; you may cover the head with jewels, and the hand with rings, and yet produce no effect, otherwise than having emptied some jeweller's counter upon your person. The best-chosen dress is that which harmonises with the figure, so as to make the raiment pass unobserved. The result of the finest toilette should be an elegant woman, not an elegantly-dressed woman. Where a perfect whole is intended, it is a sign of defect in the execution when the details first present themselves to observation. Dr. Johnson once praised a lady's appearance by saying that she was so perfectly well-dressed, he could not recollect anything that she had on. In short, the secret of dressing lies in simplicity, and a certain adaptation to your figure, your rank, your circumstances.

There are some circumstances, *mere trifles*, indeed, which strongly mark a woman of negligent and uncleanly habits; these are want of attention to the hair, the nails, the teeth, and the neatness of the boot. Females who are, in youth, careless in these respects, have seldom much order or arrangement in other particulars.

On the other hand, too great an attention to the cares of the toilet is not only an error in itself, but, in many instances, its attendant expenses are truly vexatious. Dress, it is true, may be considered the criterion of a woman's taste. One moment's survey decides the question, "Is it good or bad?" And even in this glance the spectator does not neglect to take into the account whether the dress in question be suitable to the station in life, to the circumstances of the time, the figure, and the complexion of the wearer. If it is found that fashion has not been servilely or implicitly followed, that peculiarity has been avoided, and simplicity preferred to display, the opinion formed must be in favour of her taste; and the supposition follows, of course, that the good sense which directs her choice of attire will have its influence over everything of which she has the direction and control.

On the contrary, the want of propriety of dress, whether shown in the neglect of

the person, or by a too studied and extravagant pursuit of fashion, makes a more unfavourable impression on an observing mind than mere absence of taste would produce.

It is, too, to be suspected that those females whose dress, when in company, appears so minutely studied, are frequently negligent and slovenly in their hours of domestic retirement; often, for the vain-glory of a few hours, the money, time, and thought squandered, would have been amply sufficient to have adorned, cheered, and refined whole seasons of domestic life.

Another error, or rather folly, is not uncommon; we mean that of attempting to rival in dress those whom superior station and fortune entitle to exterior distinction. To do this, is to abandon propriety and good taste, and to render ourselves liable to, and deserving of, ridicule and contempt; besides incurring the more serious inconveniences arising from any expense which is incompatible with our means.

The author of *The Art of Dress*, who, describing a real lady, says:—"Her first study seems to be the becoming—her second, the good—her third, the fashionable—which, if it be both good and becoming, is always fashionable. You see this lady turning a cold eye to the assurances of shopmen and the recommendation of milliners. She cares not how original a pattern may be, if it be ugly; or how recent a shape, if it be awkward. Whatever, therefore, fashion dictates, she follows laws of her own, and is never behind it. She wears very beautiful things, which people generally suppose to be from Paris, or, at least, made by a French milliner, but which, as often as not, are bought at the nearest town and made up by her own maid. Not that her costume is always rich or new—on the contrary, she wears many a cheap dress, but it is always pretty; and many an old one, but it is always good. She deals in no gaudy confusion of colours, nor does she affect a studied sobriety; but she either refreshes you with a spirited contrast, or composes you with a judicious harmony. Not a scrap of tinsel or trumpery appears upon her. She puts no faith in velvet bands, or gilt buttons, or twisted cordings. She is quite aware, however, that the garnish is as important as the dress; all her corner borders and headings are delicate and fresh, and, should anything peep out which is not intended to be seen, the same scrupulous care is observable. There is no great art, either in her fashions or her materials. The secret simply consists in her knowing the three grand abilities of dress—her own station, her own age, and her own points. And no woman can dress well who does not."

Drowned, Directions for Restoring the Apparently.—The leading principles of the following directions for the restoration of the apparently dead from drowning are founded on those of the late Dr. Marshall Hall, combined with those of Dr. H. R. Sylvester, and are the result of extensive inquiries which were made by the Royal National Life-boat Institution in 1863-4, amongst medical men, medical bodies, and coroners, throughout the United Kingdom.

I.—Send immediately for medical assistance, blankets, and dry clothing, but proceed to treat the patient *instantly* on the spot, in the open air, with the face downward, whether on shore or afloat; exposing the face, neck, and chest to the wind, except in severe weather, and removing all tight clothing from the neck and chest, especially the braces.

The points to be aimed at are—first and *immediately*, the restoration of breathing; and secondly, after breathing is restored, the promotion of warmth and circulation.

The efforts to *restore breathing* must be commenced immediately and energetically, and persevered in for one or two hours, or until a medical man has pronounced that life is extinct. Efforts to promote *warmth* and *circulation*, beyond removing the wet clothes and drying the skin, must not be made until the first appearance of natural breathing; for if circulation of the blood be induced before breathing has recommenced, the restoration to life will be endangered.

II.—To Restore Breathing.—*To Clear the Throat.*—Place the patient on

the floor or ground, with the face downward, and one of the arms under the forehead, in which position all fluids will more readily escape by the mouth, and the tongue itself will fall forward, leaving the entrance into the windpipe free. Assist this operation by wiping and cleansing the mouth.

If satisfactory breathing commence, use the treatment described below to promote warmth. If there be only slight breathing, or no breathing, or if the breathing fail, then—

To Excite Breathing—Turn the patient well and instantly on the side, supporting the head, and excite the nostrils with snuff, hartshorn, and smelling salts, or tickle the throat with a feather, &c., if they are at hand. Rub the chest and face warm, and dash cold water, or cold and hot water alternately, on them. If there be no success, lose not a moment, but instantly—

To Imitate Breathing—Replace the patient on the face, raising and supporting the chest well on a folded coat or other article of dress.

Turn the body very gently on the side, and a little beyond, and then briskly on the face, and back again, repeating these measures cautiously, efficiently, and perseveringly, about fifteen times in the minute, occasionally varying the side.

By placing the patient on his chest, the weight of his body forces the air out; when turned on the side, this pressure is removed, and air enters the chest.

On each occasion that the body is replaced on the face, make uniform but efficient pressure, with brisk movement, on the back, between and below the shoulder-blades or bones on each side, removing the pressure immediately before turning the body on the side.

During the whole of the operations, let one person attend solely to the movements of the head and of the arm placed under it.

The first measure increases the expiration, the second commences inspiration.

The result is *respiration* or *natural breathing*, and, if not too late, *life*.

Whilst the above operations are being proceeded with, dry the hands and feet, and as soon as dry clothing or blankets can be procured, strip the body, and cover or gradually re-clothe it, but take care not to interfere with the efforts to restore breathing.

Should these efforts not prove successful in the course of from two to five minutes, proceed to imitate breathing by Dr. Sylvester's method, as follows:—

Place the patient on the back on a flat surface, inclined a little upwards from the feet; raise and support the head and shoulders on a small firm cushion or folded articles of dress placed under the shoulder-blades.

Draw forward the patient's tongue, and keep it projecting beyond the lips; an elastic band over the tongue and under the chin will answer this purpose, or a piece of string or tape may be tied round them, or by raising the lower jaw, the teeth may be made to retain the tongue in that position. Remove all tight clothing from about the neck and chest, especially the braces.

To Imitate the Movements of Breathing.—Standing at the patient's head, grasp the arms just above the elbows, and draw the arms gently and steadily upwards above the head, and *keep them stretched* upwards for two seconds. (*By this means air is drawn into the lungs.*) Then turn down the patient's arms, and press them gently and firmly for two seconds against the sides of the chest. (*By this means air is pressed out of the lungs.*)

Repeat these measures alternately, deliberately, and perseveringly, about fifteen times in a minute, until a spontaneous effort to respire is perceived, immediately upon which cease to imitate the movements of breathing, and proceed to INDUCE CIRCULATION AND WARMTH.

III.—TREATMENT AFTER NATURAL BREATHING HAS BEEN RESTORED.—*To Promote Warmth and Circulation.*—Commence rubbing the limbs upward, with firm grasping pressure and energy, using handkerchiefs, flannels, &c. (*By this measure the blood is propelled along the veins towards the heart.*)

The friction must be continued under the blanket or over the dry clothing.

Promote the warmth of the body by

the application of hot flannels, bottles or bladders of hot water, heated bricks, &c., to the pit of the stomach, the arm-pits, between the thighs, and to the soles of the feet.

If the patient have been carried to a house after respiration has been restored, be careful to let the air play freely about the room.

On the restoration of life, a teaspoonful of warm water should be given; and then, if the power of swallowing have returned, small quantities of wine, warm brandy-and-water, or coffee, should be administered. The patient should be kept in bed, and a disposition to sleep encouraged.

General Observations.—The above treatment should be persevered in for some hours; it is an erroneous opinion that persons are irrecoverable because life does not soon make its appearance, persons having been restored after many hours of continued effort.

Appearances which generally accompany Death.—Breathing and the heart's action cease entirely; the eyelids are generally half closed, the pupils dilated; the tongue approaches to the under edges of the lips, and these, as well as the nostrils, are covered with a frothy mucus. Coldness and pallor of surface increase.

Cautions.—Prevent all unnecessary crowding of persons round the body, especially if in an apartment.

Avoid rough usage, and do not allow the body to remain on the back unless the tongue is secured.

Under no circumstances hold the body up by the feet.

On no account place the body in a warm bath unless under medical direction, and even then it should only be employed as a momentary excitant.

By order of the Committee,
Richard Lewis,
Secretary.

Drowning, How to Save a Person from.—Never approach a drowning person from the front, but take him from behind, by the hair; and never allow him to grasp any part of your body if you can possibly prevent it. But if you should find yourself so seized, sink at once to the bottom, when the hold upon you will probably be relaxed, and you will be released from your perilous position. It is only a good swimmer who should make such an attempt in deep water, as for a novice to try to rescue a drowning man by his own unaided efforts, is greatly to imperil a second life without reasonable chance of saving the first. Better hasten to secure a rope or pole, which, thrown quickly to the person in danger, may assist him in regaining shallow water or the shore. Young swimmers should never go out bathing together without having such means of assistance at hand in case of emergency.

Dry Measure.—

2 Pints	=	1 Quart—*qt.*
2 Quarts	=	1 Pottle—*pot.*
4 Quarts	=	1 Gallon—*gal.*
2 Gallons	=	1 Peck—*pk.*
4 Pecks	=	1 Bushel—*bus.*
4 Bushels	=	1 Comb—*co.*
2 Combs or 8 Bhls.	=	1 Quarter—*qr.*
5 Quarters	=	1 Wey or Load—*ld.*

Used for dry goods, and all kinds of grain.

Duke.—A dukedom is the most elevated dignity in the peerage. It was first introduced by Edward III., who created his eldest son, Edward the Black Prince (so called on account of his sable armour) Duke of Cornwall, and subsequently Prince of Wales, when the dukedom merged in the principality, and has ever since been vested in the heir-apparent to the throne, who, at his birth, becomes Duke of Cornwall.

A duke is officially addressed by the crown, "Our Right Trusty and Right Entirely Beloved Cousin and Councillor." He is also entitled, upon some occasions, "Puissant Prince."

All letters to him are thus superscribed: "To His Grace the Duke of ——."

His sons are right honourables and lords; his daughters, right honourables and ladies. The sons of royal dukes are styled princes.

In writing to a duke or marquis, it is usual to distinguish him from nobility of minor rank by using the words, "My Lord Duke," or "My Lord Marquis."

In writing to an earl, a viscount, or a baron, you simply say, "My Lord." In like manner an archbishop, who takes precedence of a duke, and is "His Grace," is addressed by letter in no other form than simply "My Lord." You give him and a duke the name of "Grace" at the termination of the letter, when you say, "I remain, my Lord, Your Grace's most obedient," &c. To all others, the marquis included, you simply say, "Your Lordship's most obedient," &c.

And yet, notwithstanding such high-sounding titles are addressed to different orders of nobility, the simple word, "sir," is, after all, the highest title of respect: the term, "sire," which is precisely the same word as "sir," or "sieur," in its original meaning, exclusively belongs to the king. He stands alone at the apex of society, and hence, to him is assigned, as by right, an appellation signifying lord or master.

The addition of "esquire" after a surname formerly belonged solely to a man of considerable landed property, next in rank to a knight; to an attendant on some noble warrior; or to one who had a place at court. Since the days of Shakespeare, who thus applied the word "squire," it has been very gradually appropriated, and is now given, as a term of courtesy, to every one who holds a respectable position in society, or belongs to a profession.

The word "gentleman," on the contrary, is more restricted.

"The king can make a belted knight,
With banner bold and spurs so bright,
All meet for tournament or fight,
But not a *gentleman*."

According to rules established in the Herald's Office, a person is entitled to the rank of gentleman, whatever may be his condition, or however dispossessed of broad lands and ancestral homes, who can show a coat of arms for five generations.

Ear, To Extract Earwigs from the.—The old plan of "dropping in oil" in the ear is not always efficacious, but placing a piece of *ripe apple* at the orifice of the ear has generally been found to answer. The troublesome insect has been lured to the fruit and fastened itself into it, thus instantaneously relieving the unfortunate sufferer of his tormenting presence in the sensitive and delicate organ.

The name of the earwig has its origin in a peculiarity in its structure, and not, as many persons suppose, from an affection for the human ear, as the following extract from Newman's "History of Insects" will show:—

"The earwig is furnished with four wings; the two fore ones are of a thick leathery substance, and the animal is unable to use them as organs of flight. The hinder wings are usually covered by the fore wings, except a small portion which protrudes behind. The shape of the wings, when fully developed, is nearly that of the human ear, and from this circumstance it seems highly probable that the original name of this insect was *ear-wing*."

Earl.—This title existed previous to the time of the Conquest, and was originally annexed to a particular piece of land, and comprised three different earldoms. The titles in each are often taken, not only from towns and countries, but from private estates, villages, and family surnames.

When addressed by the Crown an earl is designated—"Our Right Trusty and Right Well Beloved Cousin."

This mode of address was first adopted by Henry IV. The king being, either by his wife, his mother, or his sisters, actually related, or allied to every earl in the kingdom, constantly acknowledged that connection in all his letters and public acts; from whence, according to Blackstone, the usage has descended to his successors on the British throne, though the same reason does not exist.

An earl, on some special occasions, bears also the title of "Puissant Prince."

He is addressed by the Commonalty as follows:—"To the Right Honourable the Earl of ——."

The eldest sons of earls are lords, the sisters also have the title of "Ladies."

Earthenware, To Clean.—See *China*.

Easter Day.—This is a solemn festival in commemoration of the Resurrection of our Lord and Saviour. The

word is from *Ostara*, in Anglo Saxon *Eastre*, the name of a goddess once extensively worshipped by the Teutonic nations, and personifying the light of the rising sun, or the dawn; it is allied to *east*. The Roman Catholic observances of Easter week are of an elaborate character; while Protestants make it an occasion for outings and merry making, as is evidenced by the immense numbers which, at that time, take advantage of the well-ordered excursion systems of Messrs. Cook.

The viands appropriate to Easter Day, in the old times were, first of all, eggs, then bacon, tansy pudding, and bread and cheese. The origin of the association of eggs with this day is lost in antiquity. They are as rife this day in Russia as in England. There it is customary to go about with a quantity and to give one to each friend, saying, "Jesus Christ is risen;" to which the friend replies, "Yes, he is risen;" or, "It is so of a truth."

Easter Day, on which all the other moveable feasts and holy-days depend, is always the first Sunday after the full moon which happens upon or next after the 21st March. And if the full moon happens upon a Sunday, Easter Day is the Sunday after.

Easter Eve.—Before the Reformation it was customary to put out all fires on this day, and light them anew from flint. The priest blessed the new fire, and a brand from it was thought to be an effectual protection against thunderstrokes. A large wax taper, called the Paschal taper, was also blessed, and lighted beside the representative sepulchre (see *Good Friday*), and there a vigil was kept till morning. The taper used on one of these occasions in Westminster Abbey is said to have weighed 300 pounds.

Eating during Fatigue.—There are few habits more injurious to health than the common one of filling the stomach with food while the body is fatigued. Men will come from the fields, from their shops, their studies, with their bodies or brains, or both almost exhausted, sit down, hurriedly eat a hearty meal, and then go back to their labour again. If the brain, or any part or organ of the body becomes unduly fatigued, the whole system requires rest for awhile, so that the nervous influence and circulation of the blood may become equalised throughout the body before another demand is made upon the vital energies. If the stomach is filled with food while the vital forces are powerfully directed to the brain or the muscles, digestion cannot take place until an equilibrium has been established, and the blood and nervous power determined to the stomach; consequently, the food remains undigested, ferments, and becomes sour and irritates the stomach, causing derangement and disease of the digestive organs, and, through them, of the whole system. If you have any care for your health and comfort, never sit down to eat while either body or brain is fatigued from over exertion.

Ecclesiastical Licences.

	£	s.	d.
For marriage, if special ...	5	0	0
For non-residence of clergyman	1	0	0
To hold the office of lecturer, &c., or for licensing a building for the performance of divine service, or for authorising any matter relating to a consecrated building or ground (save where expressly exempted) ...	0	10	0
Licence not otherwise charged	2	0	0

Economy.—Domestic economy should especially be practised by persons with limited or fluctuating incomes. Extravagant parents must expect to have extravagant children, and when masters and mistresses do not economise, they can scarcely expect the servants to do so. Remember that there is a vast difference between economy and stinginess. Prudent persons generally set aside three-twentieths of their yearly income for contingencies; six-twentieths for household expenses; three-twentieths for servants and amusements; four-twentieths for education, personal expenses, &c.; and four-twentieths for rent, wear and tear of furniture, insurance, &c. For example:—Suppose that your income is £400 a-year, you may expend £120 on food, and £60 on servants, &c.; £80 on family and self, and the same sum for rent, &c.; while you reserve £60 for an accumulated

fund. If your income is fluctuating, set aside six-twentieths of it for a reserve fund, and divide the remainder afterwards.

"No man is rich," says Judge Haliburton, "whose expenditure exceeds his income; and no one is poor whose income exceeds his outgoings."

"He that is taught to live upon little," remarked William Penn, "owes more to his father's wisdom, than he that has a great deal left him does to his father's care."

Louis XII. was naturally inclined to economy; this was once made a topic of ridicule in his presence, to which he replied: "I had rather see my courtiers laugh at my avarice, than my people weep at my extravagance."

"Never forget to have a penny when all thy expenses are paid," taught Franklin; "then shalt thou reach the point of happiness, and independence shall be thy shield and buckler, thy helmet and crown; then shall thy soul walk upright, nor stoop to the silken wretch because he hath riches, nor pocket an abuse because the hand which offers it wears a ring set with diamonds."

Education, Household.—On this important subject Miss Martineau favours us with the following useful observations:—"From the moment that a child becomes subject to any infirmity, a special relation between him and his mother begins to exist, and their confidence must become special. She must watch for or make occasions for speaking to him about his particular trial—not often, nor much at a time, but so as to leave an opening for the pouring out of his little heart. If he is not yet conscious of his peculiarity, this is the gentlest and easiest way in which he can be made so. If he is conscious, he must have some pain at his heart which he will be the better for confiding.

"Humpbacked people are generally said to be vain, haughty, fond of dress, forward and talkative, irritable and passionate. If not so, they are usually shy and timid. I cannot see anything in their peculiarity to cause the first-mentioned tendencies, and I believe they arise from the mismanagement of their case. The fond mother and pitying friends may naturally forget that the child does not see himself as they see him, and fancy that they soothe his mortifications by saying whatever they can say in favour of his appearance—letting him know that he has pretty hair or good eyes. They may even dress him fine, to make up to him in one way for his faults of appearance in another. Under the idea of encouraging him under his supposed mortifications, they may lead him on to be forward and talkative. And then, again, his mortifications, when they come upon him unprepared, may well make him irascible. How much of this might be obviated, as well as the shyness and timidity of those who are left to themselves, by timely confidence between the mother and child! When they are alone together, calm and quiet, let her tell him that he does not look like other children, and that he will look less like other people as he grows older. Never let her tell him that this is of no great consequence; never let her utter the cant that is talked to young ladies at schools, that the charms of the mind are everything, and those of the form and face nothing. This is not true, and she ought to know that it is not; and nothing but truth will be strong enough to support him in what he must undergo. Let her not be afraid to tell him the worst. He had better hear it from her, and it will not be too much for him, if told in a spirit of cheerful patience. The child, like the man, never has a happier hour than that which succeeds the reception of bad news, if the nobler faculties are allowed their free play."

Eels.—The eel is rarely angled for, but it is usually caught by the process of sniggling, or bobbing, with night lines, &c. Being fond of quiet in the daytime, all who expect much sport in eel fishing must devote their evenings, and even whole nights, to the pursuit. The method of sniggling for eels is as follows:—Take a common needle; attach in the middle, by fine waxed twine, a pack-thread line; or, a strong, small hook fixed to this kind of line; place a large lobworm, by the head end, on your

needle or hook, and draw him on to his middle; affix another needle to the end of a long stick, and guide your bait with it into any of the known haunts of the fish, between mill boards, or into clefts of banks or holes, holding the line in your hand; now give the eel time to gorge the bait, and then, by a sharp twitch, fix the needle across his throat, or the hook into his body; tire him well, and your triumph is certain. Although this is not strictly a method of angling, the lovers of that sport will find it a successful mode of diversifying their pursuits, where eels are common. Bobbing is a rough species of angling. The best method is to provide yourself with a considerable number of good-sized worms, and string them from head to tail, by a needle, on fine strong twine, viz., to the amount of a pound, or a pound and a half, in weight. Wind them round a card, into a dozen or fifteen links, and secure the two ends of each link by threads. Now tie a strong cord to the bundle of strung worms, about a foot from which put on a bored plummet, and angle with a line from two to three feet long, attached to a stout, tapering pole. Eels, and perhaps pike, are found in no part of Great Britain in such numbers or variety as in the marshy parts of the counties of Cambridge and Lincoln. The silver eel is the finest, and is very common in Scotland. The manner in which this fish is propagated has long been a matter of dispute. They have neither spawn nor melt, as known organs of generation. Walton gravely argues for their being bred of corruption, "as some kind of bees and wasps are;" others strongly contend for their being viviparous. It is a subject, indeed, upon which naturalists have no certain information. The lamprey, "a lambendo petras, from licking the rocks," says the quaint author of "The Worthies of England," is a species of eel variously esteemed. In Worcestershire and Gloucestershire, the Severn lamprey is regarded as a luxury; and, by the city of Gloucester, a pie made of this fish is annually presented to the king. In the north of Great Britain it is much disliked. Eels bite in a shower, and in windy, gloomy weather, at the lob and garden worm, designed for other fish, particularly trout. Unlike other fish, they are never out of season. They are a very greedy fish, and if you wish to angle for them in the ordinary way, they will take a lamprey, wasp grubs, minnows, &c., but particularly the first.

Egg-powder.—See *Adulterations*.

Eggs, New Preparations with.—*Egg Curry:* Slice two onions and fry them in butter, add a tablespoonful of curry powder; let them stew in a pint of good broth till quite tender; mix in half a pint of cream, and thicken with arrowroot or rice flour. Simmer a few minutes, then add six hard-boiled eggs, cut into slices, stir them thoroughly, but do not let them boil. *A Side Dish:* Boil some eggs hard, cut them in two, take out the yolks, and beat them up with a little parsley, pepper, and salt; then replace them in the whites, and serve up with a nice white sauce. *Egg Pie:* Mince the yolks of twelve eggs, 1 lb. of suet, ¼ lb. of bread crumbs, ½ oz. of candied peel, 1 oz. of sugar, a dessert-spoonful of orange-flower water, ¼ oz. of allspice, ½ lb. of minced raisins, ½ lb. of currants, and a dozen sweet almonds; cover with a light paste, bake, and serve with wine sauce. *Egg Marmalade:* Blanch and pound with a little rose water, 2 oz. of sweet almonds, 2 oz. of orange marmalade, and 4 oz. of citron; add two tablespoonfuls of brandy, the beaten yolks of six and the whites of two eggs, with an ounce of pounded loaf sugar; put it into a saucepan, and stir it till it becomes quite thick; then pour it into a shape. When quite cold, turn it out and serve, prettily garnished. *Soyer's Recipe for Cooking Eggs, Convent Fashion:* Take two or three large onions, slice them very thin, and fry till a nice brown. Have ready three or four hard-boiled eggs cut in slices, and a cupful of nice gravy, with a little flour or arrowroot mixed with it; add the eggs to the onions, then pour in the gravy, and stir all till the gravy has thickened. Serve very hot. If a white instead of a brown dish is wished for, the onions must be stewed in butter, and the sauce made of veal broth mixed with a little milk and

flour. Pepper and salt may be used according to taste.

Egg Sauce.—Boil the eggs very hard; when taken up, throw them into cold water; take off the shells, and chop the eggs rather fine; have ready some melted butter, into which throw them; heat it well, and serve.

Eggs, To Boil.—Wash the shells clean in cold water before boiling; have a stew-pan of boiling water, into which put the eggs; keep it boiling—four minutes for very soft; five, that the yolk only may be soft; six minutes will boil the yolk hard for eating; eight minutes are required to boil eggs for salad or garnish. When done, take them from the boiling water into a basin of cold water, which will prevent the yolk turning dark or black. Boiled eggs will become harder, from the heat of the shell, if they lay a few minutes before breaking; if they are not to be served immediately, take them up a minute sooner than otherwise, and put them into a dish with a cover; in this way they will keep hot for ten or fifteen minutes, and become but little harder. If the water is kept fast boiling after the eggs are in, one minute less will do them in that case.

A more delicate way of boiling eggs is the following:—Have a stew-pan of pure water, boiling hot; put the eggs in; cover the stew-pan without putting it over the fire; five minutes will then do for those who like soft eggs, and a minute or two longer for those who like them harder. The white of eggs boiled in this way is more like poached eggs; less firm than in the other manner. If eggs are boiled in an egg-boiler at table, let the water be boiling hot when they are put in, and replenish it when more are wanted; five minutes are required when the white is wanted soft, six when the yolk only is to be soft.

Eggs, To Poach.—The most delicate way of cooking eggs is to poach them thus:—Have a clean stew-pan with boiling hot water; add to it a little salt; break the eggs one at a time into a cup, and from it slip them into the boiling water; when the white is set and firm, which it will be after about five minutes, take each up with a skimmer, and lay them in a dish over a pot of boiling water; cover the dish; when all are done, put a bit of butter, and, if liked, sprinkle pepper over them, and serve; in this way they may be kept hot and soft for a long time, so that you may do any number of them.

After boiling eggs as directed for garnishing, when they are quite cold take off the shell, and cut them lengthwise in two; then cut each half in two or three. This looks well over spinach or lettuce, or boiled fish; or cut them in slices across; or the white may be cut in long slips, and the yolk in slices or quarters.

Eggs, To Preserve.—Several modes of preserving eggs have been attempted, but with imperfect success; continued immersion in lime-water gives the egg a peculiar taste, not agreeable; some advise salt-water, but it penetrates the egg; ashes, bran, and sawdust do not preserve it; varnishing has been practised, but abandoned on account of the odour and taste which it communicates. The following experiments with pure oil will show their value:—Ten eggs were rubbed with the finger dipped in flax-seed oil, just lightly covered with the oil, which dried in a few days; ten other eggs were oiled in the same manner with the oil of the French poppy, to ascertain the comparative effect of the two oils; ten eggs were not oiled, and received no preparation; the thirty eggs were placed side by side, but not in contact, in a vessel, the bottom of which was covered with sand enough to keep them standing upright, three-fourths of each egg being exposed; they remained thus for six months; they were weighed when first put into the tub, and weighed six months after. The following will show the result:—First, the eggs not prepared lost 18 per cent. of the primitive weight, were half empty, and exhaled an odour of corruption; the eggs rubbed with oil of poppy lost 4 per cent., were full, without odour or bad taste; the eggs rubbed with flax-seed oil lost 3 per cent. of primitive weight, were also full, and had the odour and taste of an egg perfectly fresh. Hence, flax-seed oil may be deemed preferable for preserving eggs.

Electric Telegraph.—One of the greatest wonders of the age we live in is the electric telegraph. If an individual fifty years ago had predicted the mention of such means by which intelligence could be conveyed from London to America, he would doubtless have been thought a maniac.

The exact nature of the electric fluid has not yet been definitely determined. There exist several opinions respecting it. This does not, by any means, interfere with its application to telegraphy. So long as certain conditions are fulfilled by it, such as its production of any quality and in any quantity, its instantaneous transmission from place to place, with the least possible loss, and on its arrival to make some intelligible signs, there remains no necessity for the discovery of the character of electricity, in order properly to comprehend this remarkable agent.

The current is generated in a trough containing an alternating series of vertical plates of zinc and copper, and a certain quantity of acidulated water. The electricity is conveyed to the alarum, the indicator, or the line wire, as the case may be, by wires. These, and some other things of a like nature, are called conductors. Dry wood, glass, earthenware, &c., are termed non-conductors, because they insulate, or prevent the escape of the electric fluid.

The point from which the current starts is named the positive pole, and that at which it arrives the negative pole. It may seem incredible, but the electricity, communicating a despatch, let us say from London to Liverpool, after passing through the apparatus at the latter place, and thence to the earth, returns through its strata to the original starting point. Therefore, if each of the wires of a battery communicate with the earth, no matter how far distant the points of contact may be, the current will pass along the wire from the positive pole, and thence through the earth to the wire in connection with the negative pole. The description of battery alluded to is named the Voltaic, after its celebrated inventor Volta. Several others are also in use, of which the principal are Bunsen's, Daniel's, and Grove's.

Sometimes the telegraphic wires rest on posts at a certain distance apart, as in the case of those on railroads; in other instances they are enclosed in iron pipes under ground. When it is required to carry them across channels, &c., they are enveloped in gutta percha tubing, wrapped with tarred and oiled spun yarn, round which stout iron wires are bound so as to form a cable.

The railway telegraphic wires are made of iron, it having been found less expensive to have more powerful batteries, and iron wires, than those of copper, with a weaker electric current. The posts which support them are generally from fifteen to thirty feet high, five to seven inches square at the top, increasing to eight or nine at the bottom, and placed about sixty yards from each other, so that there are nearly thirty to a mile. The wires pass through perforated balls of glass or earthenware—the forms of which are various; these substances being, as before mentioned, non-conductors, the escape of the electricity is prevented.

The underground wires are covered with thread, tarred and greased on the exterior; they are then put into leaden pipes, a certain number of which are placed in an iron pipe. At certain intervals instruments are situated, termed testing posts, between any two of which a defect in the pipes or wires can at once be ascertained.

In the submarine cables copper wires are employed. Their covering has already been described.

It is, indeed, truly surprising, that lightning should be generated in cellars in the heart of the metropolis, whose flash should convey a despatch in an inappreciable fraction of time across railways and house-tops, under the earth and at the bottom of the ocean.

Electricity and Seeds.—A novel field of investigation has been opened by M. Blondeau, who has been studying the action of an induction current on fruits and seeds. The electrization of apples, pears, and peaches, he is led to believe, hastens their ripening. For the purpose of comparison, a quantity of cereal grains, peas and beans, which had been submitted to the action of an electric

current, were placed in pots filled with good garden earth, and other unelectrified seeds were planted at the same time and kept under the same conditions. The result was, that the electrified seeds always sprang up first, grew more rapidly, and gave much more vigorous and fruitful plants. One singular fact, which is given on the authority of the experimenter is, that many of the plants obstinately persisted in growing upside down; that is, with the true root coming up into the air, while the plimule was directed downward into the soil.

Ember Days.—The Wednesday, Friday, and Saturday after the first Sunday in Lent, the Feast of Pentecost, September 14, and December 13, are so called, and are observed as fasts, or days of abstinence, by the Church of England. On Ember Days our forefathers ate no bread but what was baked in a simple and primitive fashion under hot ashes; hence the name.

Emotions, The.—The emotions of the mind have a wonderful effect for good or ill on the physical and mental powers. Though the brain is the organ of mind, these, its actions, called emotions, *affections*, or *passions*, are generally felt at the heart, as that organ has, in these cases, a sudden and considerable demand made on it, to supply the necessary quantity of blood to the brain, that it may sustain the required efforts without injury. In ordinary cases the same sensations are not felt, as the mind then labours steadily, and the flow of blood is consequently regular; and this may be large, without any great excitement being felt, just as regular labour, though hard, does not produce the same sensations and feelings that a sudden excessive effort does.

Hope, *joy*, *delight*, and *love*, produce an agreeable and salutary action of the heart and other organs, increase the circulation, improve the appetite and health, often aid greatly in removing disease, and always render life more pleasing.

Anger stirs up both physical and mental powers violently, especially when it increases to *rage*; the heart beats with hurried rapidity, the blood is forced into the capillary vessels with such force as sometimes to burst them; the secretion of bile is increased, and the muscles are, for the time firm, and strong. Excessive *terror* will often produce the same results.

Fear, *grief*, *melancholy*, *despondency*, and *despair* retard the action of the heart, enfeeble the nervous and muscular system, often derange the digestive process and the bowels, interrupt or suppress the glandular secretions, and, if continued, originate severe and fatal diseases. Shame seems to stop the blood in the capillaries of the face. Many of these emotions or passions produce fatal results, or destroy mental sanity in extreme cases, particularly where great weakness previously existed.

Enamels.—White enamels are composed by melting the oxide of tin with glass, and adding a small quantity of manganese, to increase the brilliancy of the colour. The addition of oxide of lead, or antimony, produces a yellow enamel; but a more beautiful yellow may be obtained from the oxide of silver. Reds are formed by an intermixture of the oxides of gold and iron, that composed of the former being the most beautiful and permanent. Greens, violets, and blues are formed from the oxides of copper, cobalt, and iron; and these, when intermixed in different proportions, afford a great variety of intermediate colours.

Epigrams.—The word epigram is derived from the Greek word, *Epigramma*, which signifies an inscription. Epigrams are short poems, or pieces in verse, upon one subject. In fact—

"An epigram should be—if right,
Short, simple, pointed, keen, and bright;
A lively little thing!
Like wasp, with taper body, bound
By lines—not many—neat and round,
All ending in a sting."

The following examples will sufficiently explain our meaning:—

"Treason does never prosper—what's the reason?
Why, when it prospers, none dare call it treason."

"To rob the public, two contractors come,
One cheats in corn, the other cheats in rum;
Who is the greater? If you can, explain—
The rogue in spirit, or the rogue in grain?"

Et Cætera.—This abbreviation has a masculine, feminine, and neuter gender. When placed after a list of the

names of men it must be spelt *et cœter;* if after a list of women, *et cœteræ;* and if after a list of things in the neuter gender, *et cœtera*, as it is usually, though incorrectly, pronounced in all instances.

Evergreens for Rooms.—A most beautiful and easily-attained show of evergreens may be had by a very simple plan, which has been found to answer remarkably well on a small scale. If geranium branches, taken from luxuriant and healthy trees just before the winter sets in, be cut as for slips, and immersed in soap-water, they will, after drooping for a few days, shed their leaves, put forth fresh ones, and continue in the finest vigour all the winter. By placing a number of bottles thus filled in a flower-basket, with moss to conceal the bottles, a show of evergreens is easily ensured for the whole season. They require no fresh water.

Excess.—See *Alteratives.*

Excursions.—In olden times, when railways and even stage-coaches were unknown, pleasure excursions were of a very different character to what they are at the present day. Most Londoners had to content themselves with a row in a wherry-boat to Chelsea or Battersea, or, in the case of more adventurous spirits, to Greenwich or Blackwall; while those who feared the dangers of the river took pleasant strolls among the fields and lanes of Islington, Hackney, Brompton, and other rural portions of the metropolitan suburbs. Those who could afford the expense of a horse and chaise would proceed as far as Kew, or Richmond, or Edmonton, the latter being the scene of Johnny Gilpin's famous exploits. With the era of turnpike roads and stage-coaches, came the introduction of pleasure-vans and cheap river-steamers,— Hampton Court, Epping Forest, Greenwich, and Gravesend being the popular places of resort.

But the number of excursionists were comparatively few until the extension of the English and Continental railway systems afforded almost illimitable facilities for cheap excursions, the leading promoter of which was Mr. Thomas Cook, whose name must ever remain identified with the rise and development of the railway excursion system. Originating in a small excursion of Leicester Sunday-school children to a town some few miles distant from the hosiery metropolis, it has steadily progressed until it has embraced within its sphere of operations, the whole of the United Kingdom, the greater portion of Europe, Egypt, Palestine, and even the United States.

Tourists can now proceed singly or in small parties, to almost any place they like, in France, Switzerland, Italy, Holland, or Belgium, for less than it cost their grandfathers to visit Bedford or Dorking. The number of excursionists annually availing themselves of the facilities provided by Mr. Cook and his son and partner, Mr. J. M. Cook, is very large, amounting to many thousands, the aggregate number since the commencement of Mr. Cook's career as an excursion manager being estimated at more than three millions; and it is stated that not a single accident has occurred to any of those travelling under his superintendence over the railways embraced in his arrangements.

Among the favourite English localities frequented by Cook's tourists is Alton Towers, the magnificent seat of the Earl of Shrewsbury. The tours in the Scottish Highlands and in Ireland prove attractive to many; Switzerland and the Rhine, to say nothing of Italy, being the foremost places on the Continent. From the educational point of view, no less than from those of a social and political character, the Tourist arrangements of the Messrs. Cook have been most valuable. They have made thousands familiar with the appearance, manners, and customs of Continental countries; rendering more accurate their topographical knowledge, and removing many of those insularities and prejudices which have so long been regarded as blemishes in our national character.

Among the latest additions to Messrs. Cook's Tourist system is an excursion through the Waldenese Valleys: another to Nice, Mentone, Monaco, San Remo, and other places on the once expensive and little used Corniche Route: and a third to the principal cities of Spain.

Exercise.—Bodily exercise is one of the most important means provided by nature for the maintenance of health. The human body may be regarded as a wonderful machine, the various parts of which are so beautifully adapted to each other, that if one be disturbed, all must suffer. The bones and muscles are the parts of the human frame on which motion most depends. There are four hundred muscles in the body; each one has certain functions to perform, which cannot be disturbed without danger to the whole. Whether we walk or run, sit or stoop, bend the arm or head, or masticate our food, we may be said to open and shut a number of hinges, or ball and socket joints. And it is a wise provision of nature, that the more the muscles are exercised, the stronger do they become; hence it is that labourers are stronger and more muscular than those persons whose lives are passed in easy occupations or professional duties.

Besides strengthening the limbs, muscular exercise has a most beneficial influence on respiration and the circulation of the blood. A good state of health depends, in a great measure, on the proper exercise of *all the muscles.* But on looking at the greater portion of our industrial population we find them, in numerous instances, standing or sitting in forced or unnatural positions, using only a few of their muscles. But there are others who suffer from deficient exercise as much as artisans—the numerous class of shopkeepers. Week after week passes without affording them one pure inspiration, excepting, perhaps, a Sunday walk to church or chapel. When they have the opportunity, they want the inclination for exercise. They have no taste for recreation, and the natural consequences follow—which are dependent on want of circulation of blood through the bowels,—biliary derangement, constipation and headache, flatulence, diarrhœa, and sometimes an affection of the kidneys and permanent disease of the liver.

The great remedy for those distressing evils is bodily exercise of some kind every day, and as much as possible in the open air. Regularity and sufficiency of exercise are as much to be considered as our meals and sleep. Sir James Clark affirms that "the exercise which is to benefit the system generally must be in the open air, and extend to the whole muscular system. House exercise is not to be made a substitute for exercise in the open air. No person, young or old, can continue healthy without regular out of door exercise; and it is the duty of parents on placing their children at boarding schools to ascertain that sufficient time is daily occupied in this way."

Exercise, however, must be regulated by certain rules, the principal of which is to avoid carrying it to excess—to proportion it always to the state of health and habit of the individual. Active exertion should be avoided immediately after a full meal, as the foundation of heart disease is sometimes laid by leaping or running after eating.

In the next place, it is a mistake to consider the labour of the day as equivalent to exercise. Work, generally speaking, is a mere routine process, carried on, with but little variety of circumstance, in a confined atmosphere.

To derive the greatest amount of good from exercise, it must be combined with amusement, and be made pleasureable and recreative. As a rule, no one ought to have less than two hours' exercise out of doors every day. The mere change of air and of scene is in itself a good, and by leaving rooms for an hour or two untenanted, time would be afforded for their ventilation.

The greatest philosophers have written in praise of exercise. Plato said it would almost cure a guilty conscience. Bacon considered "games of recreation to belong to civil life and education." Henry IV. of France held that manly sports and exercises were the foundation "of that elevation of mind which gives one nature superiority over another."

"Look to your health," says an old writer, "and if you have it, praise God, and value it next to a good conscience, for health is the second blessing that we mortals are capable of." Her Majesty could not set her subjects a better example than by taking daily walking exercise in all weathers, and those who follow it will soon discover its pricelessness.

Exercise tells by inciting both heart and lungs to increased action and energy, and this, done in a pure air, is great gain to the purification of the blood; but exercise does much more, for not only are the lungs, with their large capacity for air, great purifiers, but the skin is little less effective towards the same end. All know the palpable effect of exercise upon the skin; but many are ignorant that the sensible perspiration is but an increase of an insensible perspiration which is unceasingly poured out from myriads of little pores—the mouths of the sweat glands and the oil glands of the skin. Stop this insensible perspiration but for a short time, and—as has been proved upon unfortunate animals—death is the quick result; the speedy, fatal effect, however, being more especially due to the stoppage of the transpiration of carbonic acid gas, which is abundantly thrown off from the skin surface, as well as the oil, water, and salts from the little glands. The ordinary insensible perspiration is continually freeing us from a mass of impurity which cannot be retained in our system without injury. Convert the insensible perspiration into sensible by exercise, and produce moderate sweating, and if the clothing be rational, you will give off to the winds the cause of many a headache and gloomy thought. Now, this increased skin secretion must come from somewhere: and so it does, for the increased exertion causes increased wear and tear of system; every step works up tissue; and muscles, blood vessels, nerves, are all used quicker than when there is no action. Off go these used-up matters, probably the worst first, through lungs and skin, as fast as they can, and the man begins to feel this waste, for from all sides there are telegraphs to the stomach for supplies; and he finds himself getting excessively hungry, the dinner-hour very welcome, and the formerly capricious stomach ready for anything; and so new supplies go in to supply the place of the old used-up works, and the physical man is greatly renovated—taken to pieces, as it were, and built up again—and in the course of a fortnight he has become a sort of *alter ego*, and returns home with the wheels so well oiled, and the works going so smoothly, that he forgets all his old grievances. (See *Air*.)

Exeter Pudding.—This is a favourite pudding after Soyer's recipe:—Put in a proper-sized basin ten ounces of fine bread crumbs, four ounces of sago, seven ounces of suet chopped fine, six ounces of moist sugar, the peel of half a lemon grated, a quarter of a pint of rum, and four eggs; stir for a few minutes with a spoon, add three more eggs, four tablespoonfuls of clouted cream, mix well, and it is then ready to fill the mould. Butter the mould well, put in a handful of bread crumbs, shake the mould well till the greater part stick to the butter, then throw out the remainder, and have ready six penny sponge cakes, two ounces of ratafias, and half a pound of either raspberry or strawberry jam; cover the bottom of the mould with a layer of ratafias, just cover them with a layer of the mixture, cut the sponge cake lengthwise, spread thickly each piece with some jam, put a layer in the mould, then a few ratafias, afterwards some of the mixture, and so on until the mould is full, taking care that a layer of the mixture is on the top of the pudding. It will take about forty minutes baking.

The Sauce: Put in a small stew-pan three tablespoonfuls of currant jelly and two glasses of sherry, warm on the fire, and pour over the pudding, and serve hot.

Eye at Birth, Colour of the.—"The eyes," says Aristotle, "of all newly-born infants are light blue, but at a later age change their colour, assuming what is to be their proper hue. This phenomenon does not occur in any marked degree in other animals than *man*. A light blue colour is a sign of weakness, and it is because the parts of infants are weak that their eyes are invariably of this colour and never of any other." "Some time ago," says Dr. Ogle, in *The Lancet*, "I took the trouble of examining into the accuracy of this statement, and found it so far true, at any rate, as to hold good in the case of such few babies as I observed. Dr. Aubert, however, states that infants are sometimes, though rarely, born with

brown eyes. He does not state whether he has himself seen such a case, or, if not, what is his authority. I would point out that it is not only the eye which, in infants, is comparatively destitute of pigment, but that the same deficiency extends at that age to other parts of the body. This is the case with the skin and hair, and also with the olfactory region of the nasal cavities. Very probably it is the case with all pigmented parts. As regards other animals than man, Aristotle seems to allow that a similar darkening of the eye may occur, though in an inferior degree. It is, however, certain that it does sometimes occur in them in as striking a manner as in man. Thus kittens are always born with blue eyes, and usually develop a dark pigment in the iris at a later period. In an instance recorded by Sichel, this change of colour commenced four months after birth."

Eye, The Last Image on the.—The last image on the retina of the eye of a dying person remains impressed upon it as on a daguerrean plate. Thus it was alleged, that if the last object seen by a murdered person was his murderer, the portrait drawn upon the eye would remain a fearful witness in death, to detect the guilty and lead to his conviction. The recent examination of the eye of Mr. J. H. Beamsley, who was murdered in Auburn, conducted by Dr. Sandford, corresponds with those made elsewhere. The following is the published account of the examination:—"At first we suggested the saturation of the eye in a weak solution of atrophine, which evidently produced an enlarged state of the pupil. On observing this we touched the end of the optic nerve with the extract, when the eye instantly became protuberant. We now applied a powerful lens, and discovered in the pupil the rude, worn-away figure of a man, with a light coat, beside whom was a round stone, standing or suspended in the air, with a small handle struck as it were in the earth. The remainder was *débris*, evidently lost from the destruction of the optic, and its separation from the mother brain. Had we performed this operation when the eye was entire in the socket, with all its powerful connection with the brain, there is not the least doubt but that we should have detected the last idea and impression made on the mind and eye of the unfortunate man. The thing would evidently be entire; and perhaps we should have had the contour, or better still, the exact figure of the murderer. The last impression before death is always more terrible on the brain from fear than any other cause; and figures impressed on the pupil more distinct, which we attribute to the largeness of the optic nerve, and its free communication with the brain."

Eyebrows and Eyelashes.—The beauty of the eyebrows is held to consist in their being arched, and in that of either side being separate from the other—

> "Gently in a crescent gliding,
> Just commingling, just dividing."

In eyelashes, the *beau-ideal* of beauty consists in their being long and glossy. In the East the training of the eyelashes forms one of the peculiar cares of the toilette. In order to increase their length and brilliancy the Circassian ladies are said, frequently, that is, ten or twelve times a-year, to cut off the tips, the *sharp points only*, of their eyelashes. It is an operation requiring considerable nicety, as, if improperly performed, it may be very injurious.

The eyebrows may be stained of a dark colour by various articles. The most simple are elderberries or burnt cloves. A solution of green vitriol has also been recommended, which is applied by means of a brush, the eyebrows having previously been washed with a decoction of galls.

Eyelids, To Remove Foreign Bodies from beneath.—The following simple process is recommended by M. Renard, an eminent French oculist:—"Take hold of the upper eyelid near its angles with the index finger and thumb of each hand, draw it gently forward, and as low down as possible, over the lower eyelid, and retain it in this position for about a minute, taking care to prevent the tears flowing out. When, at the end of this time, you allow the eyelid

to resume its place, a flood of tears washes out the foreign body, which will be found adhering to, or near the lower eyelid.

Face-ache, Remedy for.—Camphor and brandy, made strong by dissolving as much of the former as will fill a child's thimble in half a cupful of the best brandy, will be found one of the best remedies for the face-ache, when it arises from a cold in the jaw. Calico or paper is to be dipped in this mixture, and placed on the cheek or gum. Those who are much troubled with this complaint had better have out the stumps, or fill them with gutta-percha. If the pain in the face proceeds from inflammation, a dose of opening medicine, and cold water to the jaw, are very good remedies.

Fans.—The origin of the fan appears to us to date from the beginning—to be as old as man's ingenuity and the necessity for shade in a tropical climate, and therefore as proper to the islands of the Pacific as to the south of the Celestial Empire; though in the first we find it in the primitive shape of a bird's wing or a bunch of feathers, and in the other, adorned with the most curious and elaborate workmanship.

Scripture, by repeated references to the use of the fan as an instrument for winnowing corn, proves that the Hebrews were intimate with it; while the portraitures on the walls of the Egyptian saloon of the British Museum, descriptive of the domestic life of this ancient people, as well as the inscriptions on some of the sepulchral tablets, bear witness to its common use among them. It was from this nation that the Greeks and Romans borrowed the fan; and from Italy, centuries afterwards, Catherine de Medicis introduced it in its present form at the court of France.

Previous to this period it resembled the *flabellum* of the ancients, or the fans at present in use amongst the Chinese ladies, being composed of feathers, either mounted on a handle, or of painted silk or tiffany, like hand-screens in the present day.

With us the fan is said to have made its appearance in the time of Henry VIII., whose daughter Elizabeth seldom or ever appeared without one. The handle of the fan in Elizabeth's time appears to have been the most costly part of it, and Roland White describes that when Queen Elizabeth made a visit to Kew, the Earl of Leicester, on her alighting, presented her with a "fine *fanne*, the handle garnished with diamonds."

During the succeeding reign, in the days of Henrietta Maria, the feather fan assumed a more graceful, but not less expensive form than those of the Elizabethan period; and instead of being stiffened by a band of gold around each stem, fell naturally and flowingly above a handle of gold or silver filagree, and shaped like our present bouquet holders, and occasionally enriched with jewels.

Folding fans, of printed silk or paper, had also come into vogue; and it was possibly with one of these that Frances, Countess of Somerset, hid the conscious guilt in her face during the reading of the indictment charging her with the murder of Sir Thomas Overbury, at the bar of the House of Lords.

"Whilst it was reading," says Amos, in his account of this celebrated trial, "the countess stood looking pale. Alas! what wonder, when the axe of the gentleman gaoler, though with its edge turned from her, gleamed in front. She trembled and shed tears, and at that part of the indictment where the name of Weston, the actual perpetrator of the murder, was first mentioned, she put her fan before her face, and there held it covering her face till the reading of the indictment was concluded." This is not the only instance, as we shall see, in which the exhibition of the passions in the bosoms of distinguished ladies have taken sanctuary behind this little screen.

Catherine of Braganza, and her suite of swarthy ladies, first introduced the use of the sun-fan into England; those huge green shades that served the purpose of a parasol, and which were not wholly exploded from the promenade till the latter part of George the Third's reign.

By this time the painting of these elegant trinkets had become a branch of art, which the first-rate artists of those days, as now, were not above exhibiting

their skill in. Generally, the subjects chosen for their adornment were of an arcadian character, but sometimes love was mythologically treated, and the fan shone resplendent with all the pretty devices which have rendered eloquent the valentine-letters of later days. Sometimes, too, the fan was made an object on which to paint caricatures.

Marston, in his satires, tells us that the feather fans of the sixteenth century cost sometimes £40; but modern extravagance in this article has far exceeded these prices; and Mr. Duvelleroy, whose beautiful specimens have attained an almost universal celebrity, a few years back executed one for the Emperor of Morocco, of which the jewels alone cost more than £1,000.

The period when Watteau painted them, and Addison wrote his "Discripture of the Fan," appears to have been the meridian of its fashion, and of the perfection of its use in England. Under no circumstances was a lady then dressed without a gorgeous fan. It was as essential to her as to a Chinaman, whether he be an itinerant shoemaker, or one of the 7,300 ambulatory barbers of Canton, and its constant use familiarising its fair owners with all the graceful evolutions of which it is capable, rendered it scarcely less attractive in the hands of an English belle than in those of a Spanish donna.

It must have been like another hand in that of a well-trained practitioner; commanding, recalling, directing, caressing; and from the pretty monitory shake or mischievous tap of some local coquetilla, to the flutter expressive of so many emotions — of tenderest agitation or indignant anger—a certain delicacy appertained to all its movements, full of piquant and graceful power.

We have seen it screening fear and guilt in the fair face of the Countess of Somerset; a little later, and the following anecdote of Queen Mary, so illustrative of her want of good taste and good feeling, exhibits another occasion on which (to use Madame Genlis's phrase) the fan afforded "a veil and a countenance" to the royal offender:—

"The only dramatic representation witnessed by Queen Mary, who encouraged every demonstration of public opinion which her father had discountenanced, was the play of the *Spanish Friar*, which he had forbidden; but the repartees in the drama happening to be such as the spectators, hearing them with pre-occupied minds, could readily apply to the Queen, Mary was abashed, and forced to hold up her fan to hide her confusion, all the while turning round to ask for her cloke, her hood, or any article of dress she could recollect."

Last year only a great exhibition of fans took place at South Kensington Museum, under the patronage of Her Majesty, and prizes were distributed for the best painted.

But enough, we think, has been said upon our theme to show how much more might be added to invest this graceful trifle with fresh interest, which has so often induced mischief and hidden pain, masked scorn, and covered blushes, and behind which reputations have been whispered away and the tenderest confessions have been uttered. The sentimentality of the fan has been thus characterised by Addison:—"There is an infinite variety of motions to be made use of in the flutter of a fan. There is the angry flutter, the modest flutter, the timorous flutter, the confused flutter, the merry flutter, and the amorous flutter. There is scarcely any emotion in the mind which does not produce a suitable agitation in the fan; if I only see the fan of a disciplined lady, I know very well whether she laughs, frowns, or blushes."

Fashion.—What a variety of changes there has been in the costumes of men and women from the earliest periods there are on record! And these million changes have each and all had their admirers, and every fashion has been, in its way, called *beautiful*. It is evident, therefore, that the reigning fashion, whatever it be, comprehends the essence of the agreeable, and that to continue one particular mode or costume beautiful for successive ages, it would be necessary to keep it fashionable. Some nations have taken advantage of this principle in the philosophy of dress, and have, by that means, retained a particular mode

for centuries; and there is no doubt the belles of these unfading fashions were, and are, quite as ardently admired as though they had changed the form of their apparel at every revolution of the moon.

Now, as it is fashion that makes the pleasing in dress, were one particular form retained ever so long, it would always please, and thus the unnecessary expense of time and money be avoided, and the charges of fickleness and frivolity entirely repelled. We have facts to support this opinion.

Is not the Spanish costume quite as becoming as our own mode? And that costume has been unchanged, or nearly so, for centuries; while the French, from whom we borrow our fashions, have ransacked Nature and exhausted Art for comparisons and terms by which to express the new inventions they have displayed in dress.

We are aware that a certain class of political economists affect to believe that luxury is beneficial to a nation; but it is not so. The same reasoning which would make extravagance in dress commendable, because it employed manufacturers and artisans, would also make intemperance a virtue in those who could afford to get drunk, because the preparation of the alcohol employs labourers, and the consumption would encourage trade. All these views of the expediency of tolerating evil are a part of that system of selfishness which has been imposed on the world for wisdom, but which has proved its origin by the corrupting crimes and miseries men have endured in consequence of yielding themselves up as slaves of fashion and vice.

We do hope, and believe, that a more just appreciation of the true interests and real happiness of mankind will yet prevail. The improvements now so rapidly progressing in the intellectual and civil condition of nations must, we think, be followed by corresponding improvements in the tastes and pursuits of those who are the *élite* of society. Etiquette and the fashions cannot be the engrossing objects of pursuit if people become reasonable. The excellency of mind and heart will be of more consequence than the colour of ribbon, or the shape of a bonnet.

Fashion carries its votaries, as it were, in a perpetual stream, from which we make no attempt to rescue ourselves, but are borne along through all its windings, and are drawn into all the shallows into which it can pilot us. It does not regulate only the form of our gowns, or the arrangement of our head-dress, but superior tastes and opinions are equally under its dominion. Thus, works of art, however meritorious, if not sanctioned by fashion, are neglected, and the artists allowed to remain unknown. Fashion buzzes its criticisms abroad, and we all condemn or admire accordingly.

Opinion, too, is equally under the sway of this arbitrary power. There is hardly anything of a public or a domestic nature that escapes it. Fashion, more frequently than good sense, makes us pronounce judgment on the conduct of our governors and legislators; on our clergy and moralists; and it regulates our tables, frequently at the expense of prudence.

We by no means advocate an idle and stupid state of society. Excitement and change is necessary; emulation is necessary; and we must be active, if we would be happy. But there are objects more worthy to call forth the energies of rational beings than the tie of a cravat, or the trimming of a bonnet. And when the moral and intellectual beauty of character is more cultivated and displayed, we hope that the foriegn aid of ornament will be found less necessary; and when ladies are possessed of "inward greatness, unaffected wisdom, and sanctity of manners," they will not find a continual flutter of fashion add anything to the respect and affection their virtues and simple graces will inspire. Fashion is slavery in disguise. (See *Dress.*)

Feathers, for Bedding, To Clean.—Mix well, with a gallon of water, one pound of quick-lime; and when the lime is precipitated in fine powder, pour off the clean lime-water for use at the time it is wanted. Put the feathers to be cleaned in a tub, and add to them a sufficient quantity of the clear lime-water, so as to cover them about three inches. The feathers, when thoroughly moistened, will sink down, and

should remain in the lime-water for three or four days; after which the foul liquor should be separated from them by laying them on a sieve. Afterwards well wash them in clean water, and dry them on nets, about the same fineness as cabbage nets. Shake them from time to time on the nets. As they dry, they will fall through the meshes, when collect them for use. The admission of air will be serviceable in the drying, and the whole process may be completed in about three weeks. The feathers, thus prepared, want nothing further than beating, to be used either for beds, bolsters, pillows, &c.

Feathers, Structure of.—Beautiful and wonderful as are all the works of the Great Creator, a feather is eminently so. The pinion of the lark will answer our purpose, to convey this, as would that of an eagle, the construction being precisely similar. Here we have, first, the *barrel*, or quill part, a semi-transparent tube, pointed at the bottom, and closed by a dry membrane, which once connected it with the living animal, and, extending up the interior of the quill, formed the medium of nourishment to the whole feather. We have next the *shaft*, or stem, which is a continuation of the quill, and is, like that, externally of a hard, horny nature. It differs from it greatly in shape, not being cylindrical, but having four distinct sides, which become more and more clearly defined as the shaft tapers off, with an inward inclination, to its terminal point. It is lined with a soft, pulpy substance, somewhat analogous to the pith in plants, which is white and opaque, and which, like the membrane in the lower tube, is no doubt absorbed from the body of the bird, and gave out the principal of vitality to the *webs*, which Macgillivray, in his "Natural History of British Birds," describes as lateral prolongations of the external layer of the coat of the shaft into a series of filamentous substances, ordinarily placed in apposition, but by their association in this manner forming a stiffish elastic expansion. Springing out from these webs, on either side, are what are called *barbs*, which serve to hold them together, and enable them to resist the pressure of the air upon the extended wing. From the upper edge of these barbs, again, shoot other filaments, still more minute, which have been called *barbules*, and they in turn are frequently armed with *barbicles*, too small for other than microscopic observation; all these webs, and barbs, and barbules growing out of, embracing, and supporting each other.

What a wonderfully complex, and yet simple, piece of work is this feather, and what a beautiful picture of Christian unity, such as ought to prevail in the social and political systems of mankind! And all through nature do we trace these mutual dependencies—this close interweaving of the meshes of that golden net of love which is cast by the hand of God over everything which He hath fashioned, whether animate or inanimate.

> "How many a lesson they may learn,
> Who unto nature gladly turn,
> And read, with God-instructed eyes,
> The wonders of the earth and skies!"

And this feather, apparently so light and fragile, and yet, in reality, so strong and enduring, at once so simple and complex, is but one of many hundreds—nay, thousands—which go to form the covering of a single little bird—that bird one of a species—that species one of a genus, and so on. Just calculate, if it is possible, how many birds there are in the universe—*how many feathers*—who makes them all, and orders their nice arrangement, so that they shall best conduce to the safety, and the sustenance, and the enjoyment, not only of birds generally, but the particular species of bird which they at once clothe and beautify, and bear whithersoever its wants or its pleasures incline it? But we may, perhaps, be told that feathers grow as flowers and all things else do, in accordance with certain "laws of nature." Well, be it so; what then? All these wonders which we see around us are none the less marvellous and mysterious. And what a Law-giver must that be whose wisdom planned, and whose power put into execution, those primary laws by which the planets roll on unchangeably in their courses, through centuries of centuries,

and by which a feather is made as perfect now as it was in the days when Adam first listened to the song of the newly-created bird!

Feet, To Keep Warm.—Many of the colds which people are said to catch commence at the feet. To keep these extremities warm, therefore, is to effect an assurance against the almost interminable list of disorders which spring out of a "slight cold." First, never be tightly shod. Boots or shoes, when they fit closely, press against the foot, and prevent the free circulation of the blood. When, on the contrary, they do not embrace the foot too tightly, the blood gets fair play, and the space left between the leather and the stocking is filled with a comfortable supply of warm air.

The second rule is, never sit in damp shoes. It is often imagined, that unless they are positively wet, it is not necessary to change them while the feet are at rest. This is a fallacy; for when the least dampness is absorbed into the sole, it is attracted farther to the foot itself by its own heat, and thus perspiration is dangerously checked. Any person may prove this by trying the experiment of neglecting the rule, and his feet will become cold and damp after a few moments, although on taking off the shoe and examining it, it will appear quite dry.

Fennel.—If the virtues of this and many of the commoner herbs were known to the cottager in his affliction, the means of alleviating suffering might be derived from a source little thought of—from herbs growing in his own garden. It is said that the juice of this plant, taken when the stalk is nearly full grown, has the singular property of clearing the sight, and taking away the film from the eyes. At all events, this plant is extensively used, medicinally as well as in the *cuisine*, especially the seeds, which are a useful stomachic and carminative, and are admitted into the *Materia Medica* of the London Pharmacopœia.

Few plants, whether culinary or medicinal, require less culture than the common fennel; for where a plant is once established, and the seed allowed to ripen, hundreds of young plants will spring up yearly, and, being perennial, they will last many years. In raising the plants from seed, sow early in spring in shallow drills, from six to ten inches apart, and, if intended to remain, in some warm corner, to cause it to have an early growth; it is also preferable to transplanting, as the roots, from being long and fleshy, are rather tardy in striking. When the plants are three or four inches high, they must be either thinned or transplanted to about fifteen inches apart. The fennel continues good for many years; but as it sends up strong stems for seed in summer, these should be cut down, to encourage a production of young leaves below, in succession, and, by not allowing it to seed, to keep the plants from spreading more than is desirable.

The tender stalks of fennel are used in salads; the leaves, when boiled, enter into many fish sauces, particularly mackerel, and when raw are used as garnishes for several dishes. It is also eaten in this state with pickled fish. The whole of the plant is good in broth or soups; it is a hardy and wholesome herb, and agrees well with the stomach.

Fern Work.—The material used in this interesting work is white gein, or salun, as it is sometimes called. Cut out the mats the size you require, and produce the impression in the following manner:—Gather nice-shaped, well-indented fern-leaves, or, indeed, any other kind will do, especially hemlock; and they must not be heavy, but well marked with indentations. Press them in a heavy book, and when perfectly flat, lay them on your mat; they must be damped, to make them lie well. For a mat, two good-sized leaves are generally sufficient, and if placed so that the stems cross, they fill up quite enough. Then rub Indian ink very thick on a saucer, take a hard nail-brush, dip it in the ink, and, with a fine pocket-comb, squirt it on the mat, being careful to hold the light part towards you, and squirting it very fine. It must be nicely shaded; quite dark at the bottom, and quite light at the top. When dark enough, lay it (not removing the leaves) between two sheets of blotting-paper, and press it with something heavy. When dry, and well pressed, remove the

leaves, and the impression ought to be clear and distinct. Very pretty mats, watch-pockets, lamp-stands, &c., can be made in this manner.

Filter, Economical.—The clearest and best water loses nothing of its goodness by filtration, but rather improves. No house, therefore, should be without a filtering fountain. A very economical one may be made by taking out the head of a cask, setting it upright, and at a distance of about one-third from the bottom putting in a shelf or partition, pierced with small holes; the shelf is then to be covered with a layer of clean, small pebbles, over which a quantity of fresh charcoal, made from wood or bones (the latter is preferable), and fine sand should be laid, to the depth of an inch, and then covered with another layer of pebbles; over this should be placed another shelf, pierced with holes, to prevent the water which runs, or is poured in, from disturbing the prepared bed of charcoal, and sand, and pebbles. At the bottom of the cask a tap is to be placed, to draw off the water as it is wanted. If it is intended to use rain-water, a pipe should communicate from the reservoir to the top of the cask, and, in that case, the top is to be fitted in, leaving only an opening for the pipe, and sufficient vent.

Fire in a Sick-Room, Management of a.—Perhaps there are few things more difficult to manage during the long hours of the night, so as not to annoy the sleeper, than a small bedroom fire. Not to allow it to get too large, nor to go out, nor to smoke, nor to cause a noise, requires real skill on the part of the watcher. The best way is to make up the fire before night, and to cake the coals together, so as to keep burning a long while. To stir up a fire into a blaze the last thing is manifestly most unwise, the desire of the nurse being to have as little to do in replenishing it as possible. But to throw on coals, however gently done, must risk awakening the sleeper; and, therefore, as a supply of fuel is necessary, it is well that the nurse should prepare herself for feeding the fire with her own hands. Let her keep a pair of old gloves by her side, that her fingers may not be blackened (those fingers which are to administer food and medicine); and, having provided herself the last thing with a scuttle of small, knobby coals, let her put in these noiselessly as the fire burns hollow. In this way, stirring or re-lighting the fire will not often be needed; but wood, and paper, and matches should always be at hand, ready for use. Nothing is so bad as to have to seek for necessaries just at the moment they are wanted for the patient's comfort. Forethought is requisite for sparing him all inconvenience and delay.

Fireplaces.—But few persons are aware of the advantages which may be obtained by simply lining the back and sides of an ordinary fireplace with fire-brick. Everybody must have noticed that, when a fire goes out the coals at the side of the fire are left unburnt, while the centre is consumed. This arises from the cooling powers of the iron at the sides; and hence arises the complaint that you must have a large fire or none at all. With fire-brick, the whole of the fire, however small, will be kept alight, an object of great consideration in spring and autumn; and even after the fire is extinguished, the fire-brick lining will continue to diffuse warmth for some time. A no less important advantage is, that less smoke is produced.

Fish for Angling.—See *Angling*.

Flames Sensitive to Sound.—Recently, at the Royal Scottish Society of Arts, Mr. William Lees, M.A., exhibited a gas-flame which he had discovered of remarkable sensitiveness to sound. The flame, which was a long, narrow one, of 20 inches in height, issued from a glass burner, quarter of an inch in diameter, tapering to the 7-100ths of an inch, the aperture being U-shaped. Its behaviour was tested in a variety of ways. On using a penny whistle, and running over the different notes of the scale, it dipped more or less; while, to a certain note, sounded more loudly, it shrank to the height of four or five inches, widening out at the same time. The slightest tap with a hammer on an iron plate affected it even at a distance of sixty feet. It responded

to each letter of the alphabet; but it was peculiarly sensitive to the letters C, H, P, Q, S, and T. On reciting a passage from Milton, it dipped almost to every word. The shaking of a small bunch of keys, 20 feet away, made it quiver. Clapping the hands, or even walking across the room, did the same. The ringing of a bell at the outside of the hall, with two shut doors intervening, and at the distance of a 100 feet, the bell being scarcely audible to those in the hall, made the flame quiver perceptibly. Mr. Lees remarked that it was difficult, if not impossible, to account for such extraordinary results; but they showed the marvellous readiness with which the air transmitted vibration.

Flannel, To Wash.—There are three things which shrink flannel:—1. Rinsing in plain water. 2. Washing in suds too warm or too cold. 3. Drying slowly. Mix two tubs of strong lather to a warmth comfortable, but not too hot for the hand; blue the second. Take the first flannel, wash it well in the first suds, and rinse it in the second. Squeeze it out, but do not wring it. Stretch it every way between the hands with sharp pulls. Hang it to dry. When half dry, pull it out again. Never rub soap on flannels: it felts them. Never use soda: it turns them yellow. Wash each as quickly as possible, and one at a time. A fine day is best, when they can dry in the air, and a windy or sunny day is preferable. When obliged to dry them in the house, hang them near a brisk fire, separately, turn them about, and dry quickly. Use three times as much blue as to linen. If much soiled, three lathers may be wanted; but flannels should never be made dirty, as it spoils them. The best way to prepare the lather is to melt soap in a saucepan, and add enough water in a tub. If the lathers cool before the washing is over, re-boil a saucepanful of each, and return it to the lather. Be sure the saucepans are very clean.

Flatulence.—See *Exercise*.

Flies.—See *Angling*.

Floats.—See *Angling*.

Flour.—See *Bread, Flour, &c.;* also, *Adulterations*.

Flour, Weights and Measures &c.—

3½ Pounds			=	1 Quartern.
14	„	or 4 qr.	=	1 Peck or Stone.
56	„	or 4 pk.	=	1 Bushel.
280	„	or 5 bu.	=	1 Sack.

Flower Gardens, To Lay out.—In giving a few hints concerning the matter of laying out flower gardens, it must not be presumed that we are taking upon ourselves to direct how gardens should be laid out in every particular; there is a great deal that ought entirely to depend upon sound judgment and personal taste, and concerning which none but the owner has a right to decide; nor should any one garden be copied—imitations in form and style are hardly creditable, and certainly say nothing for the originality of the party concerned in laying it out. To give satisfaction and pleasure, a garden should be original in design, quiet in its simplicity and truth, effective in colouring and detail, and capable of being seen to advantage from the house or from any particular point of view. We have seen many a small garden looking neat and prim, and perfect in all that pertains to a quiet enjoyment of what is good and beautiful in its simplicity, in which no attempt has been made at display, no intricate plan, or contrasting of colours, or elaborate study of effect, but merely a winding gravel path leading through a well-kept lawn, here and there dotted with neat shrubs or beds of flowering plants, the whole enclosed by a wall on which were trained peaches, nectarines, and other fruit trees; altogether making up a picture of peaceful enjoyment as the reward of good taste, skilful manipulation, and perfect order and industry; the last, certainly not the least, for it is only by continuous and untiring industry that a garden can be kept in perfect order; and this brings us to a point of the utmost importance for consideration in the first place, and no garden should be laid out without giving it its proper weight.

A plan may be adopted that may look striking and various in its details, but which will cause endless trouble to keep in order, and be a continued source of vexation; and it should be borne in mind,

that the enjoyment of a garden would be lost, if the labour required in giving it proper attention is increased beyond a fair proportion. Every one would naturally expect that a little work is necessary for the smallest garden, in order to keep it tidy; but when that necessary work is increased to undue proportions, it is very likely to become irksome. We would therefore recommend every garden to be laid out in a style that will admit of being kept in order with a small outlay, but at the same time, that nothing be spared to produce an appearance at once effective and gratifying, and one that will become a permanent source of pleasure and enjoyment, where flowers may be produced at all times of the year, or, at least, where objects of interest may be always presented to the eye. It is easy to do this, and there are various methods of doing it; but, as before observed, every one may have peculiar ideas of what is ornamental; imitations are not inconsistent with good gardening, but in most cases are difficult to accomplish.

There are many styles that may be adopted, even in the smallest garden, and it may be observed, that every garden possesses some feature peculiar to itself; consequently it would be difficult to lay down any rules concerning their form; those with regard to making lawns, paths, beds, &c., may be fixed, and we shall describe them in detail; but, before proceeding to do so, we will furnish a few hints on the arrangement.

A garden planted principally with evergreen shrubs and herbaceous plants will present the most uniform appearance throughout the year; evergreens are seen to most advantage in the winter, and herbaceous plants flower and look gay during the spring, summer, and autumn, and some even in the winter; so that, with a proper selection of these plants, a lively and uniform appearance may be maintained throughout the year.

A garden laid out in rustic fashion, with grotto work or rockery, may be planted with what are called Alpine plants, many of which are extremely pretty and effective, similar, indeed, to herbaceous plants, excepting that they are mostly of spreading or trailing habit; and many of them look exceedingly well treated as border plants and grown on flower beds.

A very common style of garden is to have the beds or borders arranged for planting in masses or ribbons during the summer time, and then again with bulbs for spring flowering. Many gardens look extremely handsome at certain seasons of the year when planted on this principle; but then it must be admitted that, during one part of the year, the beds are bare; and although, if kept neat and clean at that time, the garden will always look well, still many object to it, and say that the superior gaiety of the summer does not compensate for the bareness of winter. We are not so certain of this, and think that one or more beds may always be devoted to summer flowers, for the purpose of producing a gay and massive effect; but this need not be immediately in sight of the windows, or in the most conspicuous part; else, when planted, and the plants are in bloom, the eye will be attracted to these alone, throwing the other part of the garden completely in the shade. Unless the whole of the ground is devoted to this style of planting, it is as well not to expose those beds that are so to the full view, but let them nestle quietly in some corner facing a summer-house, or in front of a rustic seat; but if trees overhang the spot, as is generally the case in the neighbourhood of a summer-house, it is not advisable to make any attempt at massive display, as the beds are apt to be disfigured by falling leaves, and the plants are not likely to do satisfactorily; where such is the case, it would be better to make a fernery or a piece of grotto-work, and plant it with such things as do best under trees; or if it is to be in beds, let it be occupied with plants of ornamental foliage, of which there are a great many to select from, and these of the cheapest and most common kind.

One of the prettiest and most effective borders we ever saw had not a single flower in it; the effect was produced by the different colours of the leaves of the plants, which were planted in rows or ribbons, having the first row golden variegated; the second row, red; the

third row, silvery white; the fourth row, purple; and so on, producing altogether a most striking appearance; and as it was quite under trees, where few other things would grow, or, at least, few flowering plants would do well, it will be seen what can be done by any one who has a mind to make the best of everything and to ascertain what particular plants are suitable for shade or sunshine, for damp or dry places, or to produce any desired effect differing from what is generally seen. (See *Colours, The Harmony of.*)

Flower Painting Made Easy.—There are a few necessary articles with which the learner should be provided before commencing operations in flower painting, and which can be procured at a very moderate expense. The first of these is a sloping wooden desk, which can be made by any carpenter. The height at the back should be about four inches, sloping in front, the top to lift up and down by hinges, thus forming at once a drawing-desk, and a useful box in which to keep pencils, cardboard, &c.

It will also be necessary to have a colour-box, containing such colours as are indispensable in painting flowers. These are as follow: gamboge, indigo, Prussian blue, sepia, raw sienna, burnt sienna, burnt umber, gall-stone, carmine, crimson lake, rose madder, red lead, Venetian red, cobalt, Chinese white, and Antwerp blue.

A set of brushes will also be required—sable hair, set in silver ferules, are the best, as the quills are apt to split, and, although cheaper at first, are not so in the end — numbers from 1 to 6, and two larger sizes for wide leaves and petals of flowers; a white palette, or large white plate, with a flat rim; a bottle of prepared ox-gall; two sketching pencils, an H and an F; and a sheet of fine Bristol cardboard.

Let your desk be placed on a firm table, with your left hand to the light, as the most favourable position for drawing. Cut your cardboard neatly to the size you wish, and always before you lose sight of the stamp at the corner, on the face of the cardboard, be careful to mark the right side of each piece, as the wrong side is more woolly, and consequently not so well for painting upon.

Although we do not intend insisting on the old-fashioned method of learning to draw and shade flowers completely with the pencil before attempting to colour, as we know how impatient young people are to begin with the *painting*—yet we strongly recommend the attainment of a perfect use of the pencil, so as to be able to sketch an outline with freedom and exactitude, before attempting higher efforts. To do

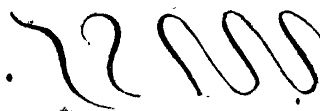


Figure 1.

this with ease, we counsel the practice of various kinds of strokes and touches, which, it will be observed, are



Figure 2.

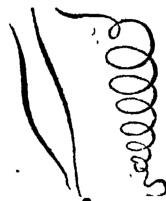


Figure 3.

begun very lightly, strengthened towards the middle, and are light again towards the end. You will never be able to give *effect* to your drawings without this touch.

It may appear strange to speak of perspective in flower drawing, as many perhaps would imagine that the rules of perspective were only applicable to landscape painting or architectural design; but we can assert that it is equally necessary in every kind of drawing, as perspective is the art of representing objects as they *appear*, and not what they *are*. For instance, if we wished to give the exact figure of a wine-glass placed at a short distance from the eye, although we know that in reality it is a pointed thing, with a round opening at the top and a round foot at the bottom—were we to depict it thus, it would have the

most distorted and unnatural appearance, and we should never guess for what it was intended. It would seem something like our Figure 4. But let us only throw it into perspective, and we have the perfect representation of the glass (Figure 5) as it *appears* to the eye. And so it is with a flower; your efforts should be directed to catch the *appearance* of the object you wish to paint, and transfer it to paper. The worst position in which to take a flower is, looking flat on the top of it; and although in grouping they may sometimes happen to fall in that way, always avoid it where it is possible.

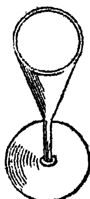


FIGURE 4.



FIGURE 5.

Having arranged your cardboard on the desk, seat yourself with your left hand to the light, your colour-box, palette, pencils, &c., with a tumbler of clean water on your right, and a piece of writing-paper to lay under your hand to preserve the cardboard clean. We will suppose that you have selected some easy simple flower to commence with, perhaps a field-poppy. Place the flower in a bottle of water at the back of your desk, so raised as to be rather above the level of your eye, or hold it lightly in your left hand; this, however, is more difficult until you have attained some proficiency, as you may require to rub out occasionally (which is best done with a piece of clean bread-crumb), when you would have to lay down the flower, and thus alter its position, which should be avoided when it is once determined upon. After having minutely observed the general appearance and *character* of the flower, with its leaves and stems, proceed to sketch it lightly on the cardboard.

The common field-poppy is remarkable for having no cup, for although the flower, while a bud, is enclosed in a cup, as soon as it expands, the calyx, or cup, falls off. The leaves are long and narrow, deeply serrated, and growing at very long distances apart down the stem. The plant is covered with short hairs.

Having sketched the flower lightly, with its leaves, stems, &c., take a small piece of bread-crumb (being particular that it has not been touched with the least particle of grease), and pass it gently over the drawing, so as to take off the loose lead; then brush away the crumbs with a soft handkerchief, and be careful not to leave the least piece on the cardboard, or it will be found a serious disadvantage in colouring.

Now observe where your lights and shadows fall. You will find that those parts of the flower which are underneath are darker, and that where many leaves or flowers are clustered together *there* the shadow will be very deep; also, those parts which are farthest from the light must be shaded more or less. But the great effect in painting depends entirely on knowing how to throw in the lights and shadows. One of the most useful combinations of colour for shading is cobalt and Venetian red. Put a small quantity of each on your palette, moistening them with a drop of water; mix them to form a cool grey. Now observe where the shade falls on your flower; take up in your brush a fair quantity of colour, about the consistence of ink, make a blot with it where you wish to throw your shade, have another brush ready with clean water, and with this subdue the colour. You must always avoid any hard edge to your shade.

Now examine the leaves, stems, and buds, and with the same colour put in the shadows, softening them off with the water-brush. As the stem of the poppy is small, like many other flowers, you will scarcely be able to do more than darken the edge away from the light by touching it down with a small brush, without attempting to use the water-brush; but practice will soon make all this easy.

When these first shades are dry, go over those parts again which require a deeper shade, particularly the middle of the flower, and never attempt to begin with the flower until your shading is quite dry. The best colour to use for a poppy is red lead and carmine, but *not* mixed, as mixing two brilliant colours frequently makes them dull and heavy.

Put a blot of red lead on the dark parts of your flower, and soften it off with your water-brush; do this once or twice, till you see your colour as dark as the *lightest* parts of the flower. While this is drying you may proceed with the leaves, &c.

Rub on your palette gamboge and Prussian blue, mix them, blot in the dark parts, and soften away to the lights with the water-brush. Now return to the flower, when you will find it necessary to mix a little carmine with your red lead in order to improve it. The middle of it must be done with green, and the stamens put in with sepia. When you have completed the flower, return to the leaves and buds; mix a small quantity of gall-stone with Prussian blue, but care must be taken to let the shade be thoroughly dry before proceeding to the colouring, and on no account attempt to heighten the shadows by mixing the black and yellow. Should you wish to darken the shade, it must be done with a touch of red lead, vermilion, or cadmium yellow, mixed with gamboge. Yellow lake comes nearest to the primrose.

You cannot do better than try your shades of colour on a separate piece of paper, until you find them correct and true to nature. Never be in a hurry to finish work, but keep it shadowy, soft, and indistinct, as long as possible, and reserve the deep, sharp, completing touches to the *very last moment.*

We will merely call the student's attention to the green colouring of leaves. Gamboge, and Antwerp blue or Prussian blue, blotted on at the darkest part and shaded off with the water-brush to the lightest, is the general colour for most leaves as the foundation colour; but you must finish the lighter parts with more gamboge, and the darker with indigo, as you work them up; and to vary them, and prevent the leaves of every plant looking of the same hue, use touches of gall-stone, burnt umber, terra-sienna, and carmine; then add a little indigo for the very dark parts; finish up the stems with this, as also the buds, and vein the leaves, according to nature, with the same; then with your finest brush, No. 1, put on the hairs with sepia or burnt umber. Here and there amongst the leaves a touch of burnt umber and carmine gives great effect. It is a very good practice sometimes, to take one or two leaves, and laying them on the card-board before you, copy them exactly, with every vein *quite flat.* This will give you the habit of looking closely into the peculiarities of your originals, and enable you to give the more faithful representation of them when thrown into perspective.

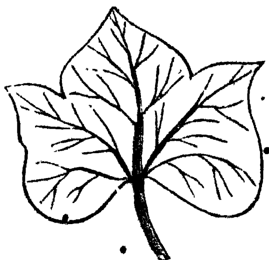


FIGURE 6.

An ivy leaf (Fig. 6) is a very pretty one for copying, showing a beautiful regularity of vein. We have also selected the leaf of the monthly rose (Fig. 7), as it is serrated at the edges, and requires a steady hand in this particular. The thorns on

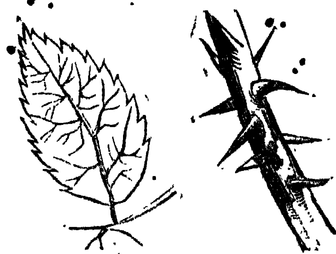


FIGURE 7.

the stem are a great beauty in the rose and many other plants. The rose is a difficult flower to paint, for it is so softly tinted that it ought to be painted or washed in without any outline at all. Therefore we recommend learners not to attempt it until they are somewhat practised; the most simple single flowers are best for beginners.

A good shadow colour for pale pink flowers is cobalt and rose madder, with a little Venetian red. Pink saucer is also a useful colour, but not to finish up with, as it becomes muddy and bronzed when much heightened. The moss on the moss rose requires a small quantity of carmine mixed with the green.

In the fuchsia there is a considerable portion of carmine in the leaves and stems; the veins of the leaves are all carmine. Some persons shade flowers, particularly yellow flowers, in Indian ink, touches of gall-stone, burnt umber, terra sienna, and carmine.

The last direction we give is, to vein your leaves and take out lights here and there as you see requisite. This may be done in two ways—either by using a little Chinese white subdued by colour, or by wiping out. The latter method is thus practised:—For veining: with a fine brush dipped in clean water, mark out the veins on the leaf; let it remain a few seconds, then with a silk handkerchief or a piece of Chamois leather wipe it smartly down once (do not *rub* it), and the veins will appear; then touch down the dark side of each with a little indigo and gall-stone. In any other part of your drawing where a bright light is required, it may be put in in the same way.

Flowers, Artificial. — The Italians were the first people in Europe who excelled in the art of making artificial flowers; but of late years the French have been most ingenious in this branch of industry. Ribbons folded in different forms, and of different colours, were originally employed for imitating flowers, by being attached to wire stems. This imitation soon gave way to that of feathers, which are more delicate in texture and more capable of assuming a variety of flower-like figures. But a great difficulty was encountered in dyeing them with due vivacity. The savages of South America manufacture perfect feather flowers (derived from the brilliant plumage of their birds), which closely resemble the products of vegetation. The blossoms and leaves are admirable, while the colours never fade. The Italians frequently employ the cocoons of the silk-worm for this purpose; these take a brilliant dye, preserve their colour, and possess a transparent velvety appearance suitable for petals. Of late years the French have adopted the finest cambric for making petals, and the taffeta of Florence for making the leaves.

Flowers, Cut, To Keep.—For keeping flowers in water, finely powdered charcoal, at the bottom of the vase, in which the stalks can be stuck, preserves them surprisingly, and renders the water free from any obnoxious qualities. Charcoal is one of the best disinfectants of water, and bits of it ought to be at the bottom of almost every flower-pot. When cut flowers have faded, either by being worn a whole evening in one's dress, or as a bouquet, by cutting half an inch from the end of the stem, in the morning, and putting the freshly trimmed end instantly into quite boiling water, the petals may be seen to smooth out and to resume their beauty, often in a few minutes.

Flowers, The Language of.—

In Eastern lands they talk in flowers,
 And they tell in a garland their loves and cares;
Each blossom that blooms in their garden bowers
 On its leaves a mystic language bears.
The rose is the sign of joy and love,
 Young blushing love in its earliest dawn;
And the mildness that suits the gentle dove
 From the myrtle, snowy flower, is drawn.
Innocence dwells in the lily's bell,
 Pure as the heart in its native heaven;
Fame's bright star, and glory's swell,
 By the glossy leaf of the bay are given;
The silent, soft, and humble heart,
 In the violet's hidden sweetness breathes;
And the tender soul that cannot part,
 A twine of evergreen fondly wreathes.
The cypress that darkly shades the grave,
 The sorrow that mourns its bitter lot;
And faith, that a thousand ills can brave,
 Speaks in thy blue leaves, forget-me-not.
Then gather a wreath from the garden bowers,
 And tell the wish of thy heart in flowers.

The language of flowers is a language that is more often spoken of than practised; but that our readers may know how to contrive a bouquet that shall tell its own story—be, in fact, a communication from sender to receiver—we append a list of flowers with their floral significations.

FLORAL DICTIONARY.

Abatina	Fickleness
Acacia	Chaste Love
Acanthus	Art
Aconite-leaved Crowfoot	Lustre
Adonis	Sorrowful Remembrance
African Marigold.. ..	Vulgarity

Agnus Castus	Chastity
Agrimony	Thankfulness
Almond Tree	Heedlessness
Aloe	Affliction
Amaranth	Immortality
Amaryllis	Pride
Ambrosia	Love returned
American Cowslip	You are my Divinity
Angelica	Inspiration
Angrec	Royalty
Apple Blossom	Preference
Arbor Vitæ	Old Age
Asclepius	Cure for Heartache
Aspen Tree	Lamentation
Asphodel	Lasting Regret
Auricula	Painting
Azalea	Temperance
Bachelors' Buttons	Single Blessedness
Balsam	Impatience
Balm	Care and Sympathy
Balm Gentle	Pleasantry
Barbary	Sourness
Basil	Hatred
Bay Berry	Instruction
Bay Leaf	I change but in dying
Bay Wreath	Reward of Merit
Bearded Crepis	Protection
Bee Orchis	Industry
Beech Tree	Grandeur and Prosperity
Betony	Surprise
Bindweed	Insinuation
Birch Tree	Meekness
Bitter-sweet Nightshade	Truth
Black Poplar	Courage
Black Thorn	Difficulty
Blue Campanula	Constancy
Box	Stoicism
Bramble	Envy and Remorse
Broken Straw	Rupture of a Contract
Broom	Humility
Buckbean	Calmness
Bugloss	Falsehood
Bulrush	Indiscretion
Burdock	Importunity
Buttercup	Childish Glee
Butterfly Orchis	Gaiety
Canary Grass	Perseverance
Candy Tuft	Architecture
Cardamine	Paternal Error
Cardinal's Flower	Distinction
Carnation	Refusal
Centuary	Felicity
Cherry	Good Education
Chestnut Blossom	Do me Justice
China Aster	Variety
China Pink	Aversion
China Rose	Beauty always New
Chrysanthemum	Cheerfulness under Adversity
Cistus	Popular Favour
Clot-bur	Rudeness
Clover	Provident
Cobœa	Gossip
Cock's-comb	Singularity
Columbine	Folly
Colchicum	My best days are past
Coltsfoot	Justice shall be done
Common Cactus	I burn
Common Reed	Complaisance
Convolvulus Major	Extinguished Hopes
Convolvulus Minor	Night
Coriander	Concealed Merit
Coronella	Success to your Wish
Cowslip	Pensiveness
Crab Apple	Ill-nature
Creeping Cereus	Horror
Cress	Resolution
Crowfoot	Ingratitude
Crown Imperial	Majesty
Crown of Roses	Reward of Virtue
Cudweed	Never-ceasing Remembrance
Cyclamen	Diffidence
Cypress	Death
Daffodil	Deceitful Hope
Dahlia	Instability
Daisy	Innocence
Damask Rose	Freshness
Dandelion	Oracle
Darnel	Vice
Dittany	Birth
Dodder	Meanness
Dog-wood	Durability
Double Daisy	Participation
Dragon Plant	Snare
Dried Reed	Scolding voice
Ebony	Blackness
Eglantine	Simplicity
Elder	Zealousness
Endive	Frugality
Evening Primrose	Inconstancy
Evergreen Clematis	Poverty
Everlasting Pea	Lasting Pleasure
Faded Leaves	Melancholy
Fennel-leaved Genarium	Ingenuity
Fig	Argument
Fig Marigold	Idleness
Fig Tree	Prolific
Filbert	Reconciliation
Flax	Fate
Flax-leaved Goldlocks	Tardiness
Fly Orchis	Error
Forget me-not	Faithfulness
Fox-glove	Youth
French Willow	Celibacy
French Marigold	Jealousy
French Honeysuckle	Rustic Beauty
Fritillary	Persecution
Frog Orphreys	Disgust
Full-blown Rose	Beauty
Fullers' Teasel	Misanthropy
Fumitory	Spleen
Garden Anemone	Expectation
Garden Chervil	Sincerity
Garden Marigold	Uneasiness
Garden Ranunculus	Rich in Attraction
Genista	Neatness
Geranium	Gentility
Goat's Rue	Reason
Golden Rod	Precaution
Grass	Utility
Greek Valerian	Rupture
Guelder Rose	Winter of Age
Hawthorn	Hope
Hawkweed	Quicksightedness
Heath	Solitude
Helenium	Tears
Hemlock	You will cause my Death
Henbane	Imperfection
Hepatica	Confidence
Hollyhock	Fecundity
Holly	Foresight
Hop	Injustice
Horse Chestnut	Luxuriancy
Hortensia	You are cold
Houseleek	Vivacity
Honeysuckle	Bond of Love
Hyacinth	Game, or Play
Hydranger	Boaster
Ipomœa	Attachment
Iris	Eloquent Messenger
Ivy	True Friendship

Japan Rose	Beauty is your only Attraction
Jonquil	Desire
Juniper	Asylum
Larkspur	Levity, Fickleness
Laurel	Glory
Laurel-leaved Marigold	Dignity
Laurustinus	I die, if neglected
Lavender	Assiduity
Lemon	Zest
Lettuce	Coldheartedness
Lilac	Forsaken
Lily	Innocence
Lily of the Valley	Return of Happiness
Lime Tree	Conjugal Fidelity
London Pride	Love Match
Lotus	Silence
Love in a puzzle	Embarrassment
Lucern	Life
Lunaria	Honesty
Lupin	Voraciousness
Lychnis	Religious Enthusiasm
Madder	Calumny
Maiden's Hair	Secrecy
Mandrake	Rarity
Maple	Reserve
Marigold	Despair
Marjorum	Blushes
Marsh Mallow	Humanity
Marvel of Peru	Timidity
May Rose	Precocity
Mercury	Goodness
Mezerian	Desire to Please
Michaelmas Daisy	Cheerfulness in Age
Mignonette	Your Qualities surpass your Charms
Milfoil, or Yarrow	War
Milk Vetch	Presence softens Pain
Milkwort	A Hermitage
Mistletoe	Parasite
Monk's-hood	Knight Errantry
Moon-wort	Forgetfulness
Moschatell	Weakness
Mossy Saxifrage	Maternal Love
Mountain Ash	Prudence
Mouse-ear Chickweed	Ingenuous Simplicity
Moving Plant	Agitation
Mulberry Tree	Wisdom
Mushroom	Upstart
Musk Rose	Caprice
Myrtle	Mildness
Narcissus	Egotism
Nightshade	Witchcraft
Oak Tree	Hospitality
Olive	Peace
Orange Blossom	Marriage
Orange Tree	Generosity
Osier	Pliability
Ox-eye	Obstacle
Palm	Victory
Pansy	Thought
Parsley	Feast
Passion Flower	Superstition
Patience Dock	Patience
Peach Blossom	Perfidy
Peony	Shame
Peppermint	Warmth of Temper
Periwinkle	Pleasures of Memory
Persicaria	Restriction
Peruvian Heliotrope	Intoxicated with Pleasure
Phlox	Unanimity
Pimpernel	Assignation
Pine Apple	You are Perfect

Pine Tree	Boldness
Plane Tree	Genius
Plum Tree	Independence
Pompon Rose	Prettiness
Poppy	Consolation in Sickness
Potato	Beneficence
Primrose	Early Youth
Privet	Defence
Quince	Temptation
Red Pink	Lively and Pure Love
Reeds, a Bundle of	Music
Rhododendron	Danger
Ripe Currants	You please all
Rose	Love and Joy
Rose Acacia	Elegance
Rose-bud	Youthfulness
Rose Campion	You are without Pretension
Rudbeakia	Justice
Rue	Purification
Rush	Docility
Saffron Flower	Do not abuse
Sage	Esteem
Sardony	Irony
Scarlet Auricula	Avarice
Scarlet Fuchsia	Taste
Scarlet Nasturtium	Splendour
Sensitive Plant	Bashfulness
Silver Fir	Elevation
Small Bindweed	Obstinacy
Small White Bell Flower	Gratitude
Snap Dragon	Presumption
Snowdrop	Consolation
Southernwood	Jest or Banter
Spanish Jasmine	Sensuality
Spider-wort	Momentary Happiness
Spiked Speedwell	Resemblance
Spurting Cucumber	Critic
Star-wort	Afterthought
Stinging Nettle	Cruelty
St. John's Wort	Sanctity
Stock	Lasting Beauty
Stonecrop	Tranquillity
Sun-flower	False Riches
Strawberry	Perfection
Swallow-wort	Medicine
Sweet Alyssum	Worth beyond Beauty
Sweet Briar	Poetry
Sweet Pea	Delicate Pleasure
Sweet Sultan	Widowhood
Sweet William	Craftiness
Syringa	Memory
Tamarisk	Crime
Tansy	Resistance
Tea	Slander
Tendrils	Ties
Ten-week Stock	Promptitude
Thistle	Surliness
Thorn Apple	Deceitful Charms
Thrift	Dauntless
Throat-wort	Neglected Beauty
Thyme	Activity
Tiger Lily	Pretension
Trumpet Flower	Separation
Tuberose	Voluptuousness
Tulip	Declaration of Love
Turnip	Charity
Valerian	Accommodating Disposition
Venus's Looking Glass	Flattery
Veronica	Superstition
Vine	Drunkenness
Violet	Modesty

Wallflower	.. Fidelity in Misfortune
Wall Speedwell ..	.. Fidelity
Water Lily	.. Purity
Water Melon ..	.. Bulkiness
Weeping Willow ..	.. Mourning
Wheat ..	.. Riches
White Jasmine ..	.. Amiableness
White Mullien ..	.. Good Nature
White Pink . ..	.. Talent
White Poppy ..	.. Sleep
White Poplar ..	.. Time
White Rosebud ..	.. Ignorant of Love
White Violet ..	.. Candour
Whortle, or Bilberry	.. Treason or Treachery
Winter Cherry ..	.. Deception
Wood Anemone ..	.. Sickness
Wood Sorrel ..	.. Joy
Wormwood	.. Absence
Yellow Carnation..	.. Disdain
Yellow Day Lily ..	.. Coquetry
Yellow Iris	.. Flame of Love
Yellow Rose ..	.. Infidelity

"The first principle to observe," says the author of "Floral Emblems," "is that the pronoun *I*, or *me*, is expressed by inclining the flower to the left; and the pronoun *thou*, or *thee*, by sloping it to the right, but when represented by drawings on paper, those positions should be reversed, as the flower should lean to the heart of the person whom it is to signify. The articles, *a*, *an*, and *the*, may be expressed by tendrils: the first by a single tendril, the second by a double tendril, and the third by one with three branches.

"The second rule is, that if a flower, presented upright, expresses a particular sentiment, when reversed, it has a contrary meaning. Thus, for example, a rose-bud upright, with its thorns and its leaves, means, 'I fear, but I hope.' If the same bud is returned, held downwards, it signifies, 'You must neither hope nor fear.' But if the thorns be stripped off, it expresses, 'There is everything to hope. Deprived of its leaves, it signifies, 'There is everything to fear.' Thus the expression may be varied of almost all the flowers, by changing their position.' The flower of the marigold, for example, placed on the head, signifies, 'trouble of spirits;' on the heart, 'trouble of love;' on the bosom,' 'weariness.'

"The pansy, held upright, denotes 'heart's ease;' reversed, it speaks the contrary; when presented upright, it is understood to say, 'think of me;' but when offered pendent, it means, 'forget me;' and thus the amaryllis, which is the emblem of pride, may be made to express, 'my pride is humbled, or 'your pride is checked,' by holding it downwards, either to the left or the right, as the sense requires. In the same manner the wallflower, which is made the emblem of fidelity in misfortune, if presented with the stalk upwards, would insinuate that the person was considered no friend to the unfortunate."

Flowers, To Extract the Essential Oil from.—Take any flowers desired, and stratify them with common sea-salt, in a clean earthen glazed pot. When thus filled to the top, cover it well, and carry it to the cellar. Forty days afterwards put a crape over a pan, and empty the whole to strain the essence from the flowers by pressure. Bottle that essence, and expose it four or five weeks in the sun, and to the dew of the evening, to purify. One single drop of that essence is enough to scent a whole quart of water.

Or—Procure the petals of any flowers that have an agreeable fragrance, card thin layers of cotton-wool, which dip into the finest Florence or Lucca oil, sprinkle a small quantity of fine *salt on the flowers*, and place them on a layer of cotton and a layer of flowers, until an earthen jar or wide-mouthed glass bottle is full; tie the top close with a bladder, then lay the vessel in a south aspect to the heat of the sun, and in fifteen days, when you uncover it, a fragrant oil may be squeezed out of the cotton mass, which will be found little inferior to the celebrated ottar of roses, if those flowers have been used.

Fly-Making.—See *Angling*.

Food, Relative Value of Articles of.—The following table is authorised by recent chemical examination of the articles enumerated:—

	lbs.
100 lbs. of Seeds of Peas contain of nourishing matter	93
100 lbs. of French Haricot Beans...	92
100 lbs. of Broad Beans	89
100 lbs. of Wheaten Bread ...	80
100 lbs. of Butcher's Meat ...	35
100 lbs. of Grapes...	27
100 lbs. of Apricots	26
100 lbs. of Potatoes	25
100 lbs. of Cherries	25

	lbs.
100 lbs. of Peaches contain of nourishing matter	25
100 lbs. of Gooseberries	19
100 lbs. of Apples	17
100 lbs. of Pears	16
100 lbs. of Carrots	14
100 lbs. of Strawberries	13
100 lbs. of Cabbage and Turnips...	8
100 lbs. of Melon	3

Food Solvent, A New.—Dr. Arthur Farr says:—"About five years ago I was the first, I believe, to promulgate the view that the prophylactic virtue of lime-juice and other acids in curing scurvy depended upon their direct action as food solvents, and since that time it occurred to me that an excellent artificial gastric juice might be made by allowing the lime-juice to represent the acid portion. Accordingly, I had prepared for me a mixture of lime-juice and pepsine, which I, and many of my medical friends, have since used with the best results in cases of dyspepsia. Lime-juice with either pepsine or pancreatine forms a very elegant preparation; it is, moreover, most convenient for prescribing, and may be made to keep almost any length of time without deteriorating." (See *Cookery*.)

Foreheads, Physiognomy of.—Foreheads are, after mouths and eyes, the clearest indications of character, and they are the more important that the individual cannot deceive with the forehead as he can with the eyes or mouth. A man with a savage mouth may hide it with a cultivated moustache. Paint, again, can be and is used to soften the rigour of the eyes, eyelashes, and eyebrows; cosmetics are used—but little can be done with the forehead. You cannot cover the effect of the forehead with spectacles, as you can the eyes. You may lengthen or increase the effect by the use of the hair, but the character of the forehead is not to be disguised.

Foreheads are of vastly varying character. Here is some description of the finest foreheads that exist. It must not be too square, for that indicates obstinacy, and total want of that poetry which tends to harmonise mankind. It must not be too shelving, as that indicates weakness. Such heads, too, are seldom associated with people of deep powers of love, emotion, tenderness, or consideration for others.

The most lovely, and therefore the most womanly, forehead in a woman, is low, almost upright, almost flat, broad, and sweeping at the temples. The hair generally crosses the forehead in a line parallel to that formed by the eyebrows, which are very slightly arched, soft, never ragged, and in no way knotted at the ends near the root of the nose. The space between the eyebrows is always fairly broad, without wrinkles, soft-looking, and gives that calm reliance to the face which is not the least charm in the countenance of a beautiful woman. This forehead is usually associated with an earnest, sweet, sensuous, feeling, but never weak face. Generally this is the kind of woman about whom men go mad, and of whom her sister women, declare, that they can see nothing in her to call for special notice.

These women are never wonderfully wise, or witty, or dexterous. Their qualities are love, tenderness, devotedness, virtue, honour, industry, faith, hope, and the power to attract a love in their children.

The forehead of the clever woman, who has her work to do in this world—and it is rarely of a domestic character, for exactly as there are men not fitted to matrimony, so there are women of a similar mental composition—assimilates to that of the man of universal ability, no matter in what line, and which, in its integrity, may be thus described:—

This forehead is well and sweepingly arched, and has in the middle between the eyebrows, one of two slightly discernible, perpendicular wrinkles, not sufficiently long to appear ugly. If there be two wrinkles, nearly parallel, or running at equal distances apart, the higher the character of the forehead. Two wrinkles almost crossing each other totally alter the character of the forehead. If with this forehead the eyebrows are marked, compressed, and regular, that forehead belongs more or less to those of the very first magnitude of intellect, which does not, however, necessarily indicate the highest morality.

Foreign Monies, with their Equivalents in English Currency.—

America.

100 Cents=1 Dollar.

	Dl	Ct		£	s	d
Eagle	10	0	=	2	1	0
Doubloon... ..	—		=	3	4	0
Dollar	1	0	=	0	4	0
Cent	0	1	=	0	0	0½

France, Belgium, and Switzerland.

100 Centimes=1 Franc.

	Fr	Ct		£	s	d
Napoleon	20	0	=	0	15	10
Five Franc Piece...	5	0	=	0	4	0
Franc	1	0	=	0	0	9½
Sous	0	5	=	0	0	0½

East Indies.

12 Pice=1 Anna. 16 Annas=1 Rupee.

	Rp	An	Pice		£	s	d
Mohur ...	15	0	0	=	1	9	3
Rupee, Sicca...	1	0	0	=	0	1	10½
Half Rupee ..	0	8	0	=	0	0	11¼

Germany—South.

60 Kreutzers=1 Florin.

	Fl	Kr		£	s	d
Ducat	5	0	=	0	9	0
Crown	2	42	=	0	4	4
Florin	1	0	=	0	1	8

Austria.

100 Kreutzers=1 Florin.

	Fl	Kr		£	s	d
Sovereign... ...		..		1	7	6
Ducat ...	5	0	=	0	9	3
Florin or Gulden...	1	0	=	0	2	0

Prussia and North Germany.

100 Pfennige=10 Silbergroschen=1 Mark.
30 Silbergroschen=1 Thaler.

	Mk	Pf		£	s	d
20-Mark (gold) ...	20	0	=	0	19	7
Thaler	3	0	=	0	2	11½
Mark	1	0	=	0	1	0
Silbergroschen ...	0	10	=	0	0	1¼

Holland.

100 Cents=1 Florin.

	Fl	Ct		£	s	d
10-Florin (gold) ...	10	0	=	0	16	8
Florin (Guilder) ...	1	0	=	0	1	8
5-Cents (Stuiver)...	0	5	=	0	0	1

Spain.

34 Maravedis=1 Real. 20 Reals=1 Dollar.

	£	s	d
Doubloon	3	5	0
1 Dollar	0	4	2
Cent	0	0	0½

Portugal.

4 Testone=1 Crusado.
2½ Crusado=1 Milrei.

	£	s	d
Half Joe	1	15	6
Crusado Nova	0	2	3

Italy.

100 Centesimi=1 Lira or Franc.

	£	s	d
1 Lira Nuova or Franc ...	0	0	9½

Denmark.

96 Skillings=1 Rigsbankdaler.

	Rg	Sk		£	s	d
Speciesdaler ...	2	6	=	0	4	4
Rigsbankdaler ...	1	0	=	0	2	3

Russia.

100 Kopecks=1 Rouble.

	Rou	Ko		£	s	d
Half Imperial ...	5	10	=	0	16	3
Rouble	1	0	=	0	3	2
Copek	0	0	=	0	0	0¼

Turkey.

40 Paras=1 Piastre.

	Piastre			£	s	d.
Turkish Lira ...	100	0	=	0	18	0
Beshlik	5	0	=	0	0	11
Piastre	1	0	=	0	0	2½

Greece.

100 Lepti=1 Drachma.

	£	s	d
1 Drachma	0	0	8½

Forfeits.—Young people are often at a loss for good forfeits in their Christmas games. In the absence of advice upon the subject, the penalties they impose are sometimes vulgar, or highly absurd, creating confusion where innocent pleasure is designed. The following are suggested to help them out of the difficulty:—

1. Let the person who holds the forfeit give out a line, with which the one who owns it shall make another line to rhyme.

2. Laugh first, sing next, then cry, and lastly whistle.

3. Put one hand where the other cannot touch it. [The right hand to the left elbow.]

4. Stand with your heels and back close to the wall, then stoop without moving your feet, and pick up the forfeit.

5. Compare your lady-love to a flower, and explain the resemblance. Thus—

My love is like the blooming rose,
Because her cheek its beauty shows.

Or, [facetiously]

My love is like a creeping tree,
She's always creeping after me.

6. Place your hands behind you, and guess who touches them. You are not to be released until you guess right.

7. Say "Quizzical quiz, kiss me quick," nine times without a mistake.

8. The person who owns the forfeit is to be blindfolded: a glass of water and a teaspoon are then to be got, and a spoonful given alternately by the members of the company, until the person blindfolded guesses right.

9. Ask the person who owns the forfeit what musical instrument he likes best; then require him to give an imitation of it.

10. Ask him to name what borough he would like to represent in Parliament; when the selection is made, he is to spell the name backwards, without a mistake.

11. If a gentleman he must put on a lady's bonnet, and imitate the voice of the lady to whom it belongs; if a lady, then a gentleman's hat, &c. (Sometimes these imitations are very humorous. A sentence often used by the person imitated should be chosen.)

12. Go to service: apply to the person who holds the forfeits for a place—say as "maid of all work." The questions then to be asked are, "How do you wash?" "How do you iron?" "How do you make a bed?" "How do you scrub?" "How do you clean knives and forks?" The whole of these processes must be imitated by motions, and if the replies be satisfactory the forfeit must be given up.

13. Choose three flowers. Example.—Pink, fuchsia, and lily. Two of the party must then privately agree to the three persons of the forfeiter's acquaintance to be severally represented by the flowers. Then proceed: "What will you do with the pink?" "Dip it in water." "What with the fuchsia?" "Dry it and keep it as a curiosity." "With the lily?" "Keep it until it is dead, then throw it away." The three names identified with the flowers are now to be told, and their fate will excite much merriment.

14. Put two chairs back to back, take off your shoes and jump over them. (The fun consists in a mistaken idea that the *chairs* are to be jumped over, whereas the grammar of the sentence means only the *shoes*).

Fowls, How to Keep.—No fowls can possibly thrive well, or be profitable to the owners, unless they are plentifully fed and have a comfortable place to roost in at night and for a shelter in cold or wet weather. Their room, or hen-house, may be adjoining some other out-building. It is best to have it facing the east or the south, and it must be perfectly weather-tight. It should have a door and window, and be very well lighted: the windows may either be latticed with wood, or netted with iron wire. In the evening, after the fowls have gone to roost, let the door be locked, seeing that it is opened very early in the morning, unless in bad weather. The hen-house should be frequently cleaned out, and occasionally whitewashed; for if kept dirty, the fowls will be infested with vermin. If this *should* happen, catch every fowl, even to the smallest chicken, and rub their skins and feathers well with lard or dripping; then have their house thoroughly cleaned and whitewashed at once, afterwards fumigating it with burning brimstone. Next, throw some sand or fresh earth upon the floor.

If fowls are scantily supplied with water, or if they have access only to that which is dirty or puddled, they will contract a disorder called the pip, which is a thin white scale that grows at the tip of the tongue, and prevents their feeding. Catch them, pull off the scale with your forefinger nail, and then rub the tongue with salt. When fowls have this or any other disease, they look drooping, their eyes appear dull, and their combs and gills become pale and flabby. When they are sick, feed them with bran that has been mixed to a paste with boiling water.

In wet weather, keep the fowls shut up all day in the hen-house; also when it is very cold, taking care that they are properly supplied with food and water. They should have in their house a little manger or feeding-trough, which ought never to be empty. If they have plenty of food always by them, they will eat frequently, but only a little at a time, and it is best for them to do so. When their food is

given scantily and irregularly, they injure themselves by devouring it too fast.

They should have food given to them regularly three times a day. When newly hatched, they may have bread soaked in milk. By way of variety, you may give your fowls, occasionally, buck-wheat, barley, rice, and oats.

If always fed there, they will stay chiefly in their house during the winter, and will, in consequence, be more healthy and in every respect more profitable. They must be well supplied with plenty of clean water, in large shallow pans of tin or earthenware; and also with brick-dust or gravel, to assist their digestion. It is well to place in the centre of their large water-pan a small but heavy one of earthenware, turned bottom upwards, on which the fowls can stand to drink without wetting their feet, which often in winter makes them sick. Recollect always that dirty water gives them diseases. But a little clean brick-dust thrown occasionally into their drinking-pans is good for their digestion.

Their nests should be movable, that whenever the hen is done sitting they may be taken away, and cleaned out before they are replaced. For the nest, you may place on the floor, not far from the walls, but not against them, old flat baskets, or deep boxes set up on the side, the open or entrance part turned *from* the light. [illegible]m with clean dry straw or hay. Place near the boxes lime, for the hens to form their egg-shells. Old rubbish, lime, or plaster from old walls, is very proper for this purpose if well broken up. If you cannot procure this, mix lime and water to a mortar; let it dry, then break it up and put it into the hen-house. See that the setting hens have plenty of food and water every day, at the time they come off their nests. If they are not supplied at once they will go back to their nests without waiting, and suffer much in consequence.

Their roosts, or perches, should be so contrived as not to be exactly over each other, and some should be placed low enough for the young fowls to reach without difficulty in flying up to them. Let none of the nest-boxes be placed under the roosts.

The hen-house should frequently be cleaned out, whitewashed, fumigated with sulphur, or by burning boughs, and then strewed with sand.

Wormwood and rue, sowed plentifully every spring about the neighbourhood of the hen-house, will tend to keep away vermin; and if strewed about the floor in the vicinity of their nests, it will keep off weasels and other such animals that come to suck the eggs.

Bantam fowls are less injurious to a garden than any others, as the feathers about their feet prevent them from scratching up the seeds. If your garden fence has the paling sharp-pointed at the top, the fowls that are outside will find it difficult to get over as after flying up to the top, they will have no place to rest their feet on while preparing to take their flight downward.

Frames, Gilt, To Preserve from Flies—Boil three or four onions in a pint of water. Then with a gilding brush do over your glasses and frames, and be assured that the flies will not rest on the articles washed. This simple performance may be done without apprehension, as it will not do the least injury to the frames. Once during the spring and summer will be sufficient for this application.

Frangipanni.—There is in Rome a family bearing the patronymic of Frangipanni, as famous in Italy as the Plantagenets and the Tudors in England. The origin of the name of this family is traced to a certain office which an ancestor filled in the church—that of supplying the holy bread, or wafer, in one of the ceremonials. Frangipanni literally means "broken bread," and is derived from *frangi*, to break, and *panus*, bread. Hence we have the Frangipanni puddings, which good housewives know are made with the broken bread. One Mercatis Frangipanni, who lived in 1493, was a noted botanist and traveller, famous as being one of the Columbus expedition when they visited the West India islands. The sailors, as they approached Antigua, discovered a delicious fragrance in the air. This, Mercatis told them, must be derived from sweet-smelling flowers. On

landing they found vast quantities of the *Plumeria alba* in full bloom, rendering the air redolent with rich odour. From this plant, which the present inhabitants of Antigua call the Frangipanni flower, is distilled that exquisite fragrance now so popular in fashionable circles.

Fruit, Artificial, To Make.—The first process is forming the mould from which the cast of fruit is to be taken. This is done by mixing plaster of Paris with water, to the consistency of thick paint. As the mould of fruit cannot be taken whole, it is necessary to prepare it for the parts required. For an apple, orange, or pear, two parts will be sufficient; but in other cases, when the fruit abounds in irregularities, it is requisite to take the mould in three or more parts, otherwise it will be difficult to remove.

In preparing an apple, &c., it is necessary to oil the surface of one half of the fruit, which, having done, place over it the plaster of Paris; as it sets, or dries, which it will do very quickly, smooth the edges to the exact half, with a knife, making at the same time several notches in the edge, in order that the two parts, when taken, may fit closely; when the plaster is sufficiently hardened, oil the edge with a camel-hair pencil, and prepare for taking the mould of the second half, which is performed in the same manner; the two halves, placed together, will form a perfect mould, the plaster being readily removed by means of oiling.

The next process is taking the cast; the parts of the mould will be rendered more hard by immersion in cold water; all the parts must now be bound together with string. Prepare the wax by melting it to the consistency of cream, pour it into the mould at the aperture caused by the stalk, which must be increased should the orifice be not sufficiently capacious to admit the wax; when the wax is thoroughly hardened, the string must be removed, and the pieces of the mould taken from the fruit; a perfect cast of the fruit is thus produced. The colours used are to be obtained in powder and delicately put on the wax by means of the finger, the lighter parts being touched with a camel-hair pencil.

With some description of fruit, as an orange, grapes, &c., the colour may be put in the wax and the bloom produced afterwards by the use of the powder. The stalks are formed and inserted at the top of the fruit. The leaves are produced by thin sheets of wax, punched out to the size required, with punches prepared for the purpose; these can be obtained at any tool warehouse.

Fruit Jars, To Make Air-Tight.—For the preservation of all kinds of fruit use glass bottles or jars. Select those of even thickness, or rather of even thinness, for they are often exposed to considerable heat; and while they should not be so thin as to break in common handling, or burst from internal pressure caused by fermentation, still they should not be thick, or of pressed glass, when blown-glass jars can be readily obtained. So much for the bottles. Now as to closing them air-tight, we know corks will not do it. The very structure of the substance is against it, unless cork of the most velvety character is obtained—and this is costly. We recommend waxed cloth, tied over the jar, as a substitute at once cheap and effective, and have never found anything superior to it. Prepare the cloth in this manner:—Melt together some rosin, beeswax, and tallow, in equal parts; tear the cloth in strips four inches wide, or at least wide enough conveniently to tie over the mouth of the jar, and draw them through the hot wax. With cloth thus prepared, after the jar is filled with hot preserves, and while still hot, close the mouth, and bind it with good linen cord. Then with shears trim off as much of the waxed cloth as is desirable, and dip it in some melted wax, which should be made with only about half as much tallow. Sealing-wax may be used instead, if desired. The jars should be put where the wax will cool at once, so that the exhaustion caused by the cooling of the preserves and the condensation of the steam may not cause the wax to run through the cloth. Nothing can be so thoroughly air-tight as bottles so preserved.

Fruit-rooms.—The fruit-room ought to be well ventilated, for which purpose it should have a fireplace in it. The room may be of any form, but one

long and narrow is generally best for ventilation, and heating and drying, when necessary, by a flue. The shelves may be placed along on one side, and should be raised to the height of six feet, or more, according to the number wanted. Forsyth directs that all the shelves or floors on which apples are to be kept, or sweated, should be made of white deal, as, when red deal is used, it is liable to give a disagreeable, resinous taste to the fruit, and spoil its flavour. When white deal cannot be procured, he advises covering the shelves with canvas.

Fruit, To Candy.—After peaches, plums, citrons, or quinces have been preserved, take the fruit from the syrup, and drain it on a sieve; to one pound of loaf sugar put half a teacupful of water; when it is dissolved, set it over a moderate fire; when boiling hot, put in the fruit, stir it continually until the sugar is candied about it, then place it upon a sieve, and dry it in a warm oven, or before a fire; repeat this two or three times, if necessary.

Fruit, To Pack.—Nothing requires so much care as to pack fruit for presents, &c. It is generally done in baskets; but this should not be, as they are often placed among heavy articles, and the fruit, of course, will become bruised and spoilt. Strong deal boxes have been recommended in lieu of the baskets; the size of the box, of course, to vary with the quantity of fruit to be arranged for. Follow this plan in packing:—Put a layer of dry moss at the bottom of the box, then some fruit, then another layer of moss, and so on, alternating moss and fruit until the box is so full that the fruit cannot be exposed to friction.

For instance, suppose it is required to send a quantity of fruit, consisting of melons, pears, plums, peaches, nectarines, and grapes, we should proceed as follows:—Pack the melons in first—taking care that they are nearly of a size—and fill up any interstices with grass and moss.

When the melons are provided for, put a layer of moss and grass over them, upon which you can place a tin box with currants, packing it well all round with grass, to prevent friction, then place a layer of moss over the box, and pack the pears firmly on that layer, similar to the melons, and the same way with the plums, nectarines, and peaches, and, last of all, the grapes, filling up the said box with moss and grass, that the lid may shut down so tight as to prevent any friction among the fruit.

Two keys should always be provided to each box, so that the persons who pack and unpack should have a key. In returning the box the moss and grass should always be sent back, which, with a little addition, will serve the whole season, being well aired and shaken up after each journey. The box should be corded firmly, as well as locked. Fruit thus packed may be safely sent to any distance, when it would arrive fresh and sound.

Fruit, Value of, in Fevers.—Acids promote the separation of the bile from the blood, which is then passed from the system, thus preventing fevers, the prevailing diseases of summer. All fevers are "bilious," that is, caused by bile in the blood. It is a common saying that fruits are "cooling," and also berries of every description; it is because the acidity which they contain aids in separating the bile from the blood, that is, aids in purifying the blood. Hence the great yearning for greens, and lettuce, and salads, in the early spring, these being eaten with vinegar; hence, also, the taste for something sour, as lemonade, on an attack of fever. But this being the case, it is easy to see that we nullify the good effects of fruits and berries, in proportion as we eat them with sugar, or even with sweet milk or cream.

Fuel, Economy of.—There is no part of domestic economy which everybody professes to understand better than the management of a fire, and yet there is no branch in the household arrangement where there is a greater proportional and unnecessary waste. It is an old adage that we must stir no man's fire until we have known him seven years; but we may find it equally prudent if we are careful as to the stirring of our own. Anybody, indeed, can take up a poker and toss the coals about; but that

is not stirring a fire. In short, the use of a poker applies solely to two particular points—the opening of a dying fire, so as to admit the free passage of the air into it, and sometimes, but not always, through it—or else bringing together the remains of a half-burned fire, so as to concentrate the heat whilst the parts still ignited are opened to the atmosphere.

The same observation may apply to the use of a pair of bellows, the mere blowing of which, at random, nine times out of ten will fail, the force of the current of air blowing out the fire, as it is called, that is, carrying off the caloric too rapidly, and at others directing the warmed current from the unignited fuel instead of into it. To prove this let any one sit down with a pair of bellows, to a fire only partially ignited, or partially extinguished; let him blow, at first, not into the burning part, but into the dead coals close to it, so that the air may partly extend to the burning coal. After a few blasts let the bellows blow into the burning fuel, but directing the stream partly towards the dead coal; when it will be found that the ignition will extend much more rapidly than under the common method of blowing furiously into the flame at random.

If the consumer, instead of ordering a large supply of coals at once, will at first content himself with a sample, he may with very little trouble ascertain who will deal fairly with him; and if he wisely pays ready money, he will be independent of his coal merchant—a situation which many families, even in *genteel* life, cannot boast of. Indeed, we cannot too often repeat the truth, that to deal for ready money only, in all departments of domestic arrangements, is the truest economy. Ready money will always command the best and cheapest articles if expended with judgment; and the dealer who means to act fairly will always prefer it. Trust not that tradesman who seems more anxious to give credit than to receive cash. There is, likewise, another consideration, as far as economy is concerned, which is, not only to buy with ready money, but to buy at proper seasons; for there is with every article a cheap season and a dear one, and with none more than coals; inasmuch that the master of a family, who fills his coal cellar in the middle of summer, rather than at the beginning of the winter, will find it filled at 25 per cent. less than it would otherwise cost him.

Furs and Woollens, To Preserve from Moths.—Furs and woollens should not be laid aside for the summer months without having the dust well shaken out of them, and being well dried in the sun and air, or before a fire if the weather should prove unfavourable. Care must be taken that they are free from damp, for dust and moisture are the great foes to be guarded against in the first instance, as tending to encourage the increase of moths and other insects. Many things are used as preventives against the inroad of moths; such as sprinkling furs and woollens with spirits of turpentine; putting camphor, peppercorns, cedar-shavings, and Russian leather amongst them; but the best plan is to sew the furs up in linen, well aired, through which the moths cannot penetrate; and once or twice in the course of the summer to have them taken out on fine sunny days, and, after being well shaken, replaced in their linen envelopes and put aside.

A writer who seems to know says, "Darkness is all that is needed to keep furs from the little grey moth, or 'miller,' which deposits its eggs and moves only in the light. Enclose the article loosely in a paper box, put this in a pillow-case, or wrap it round with cloth, and hang it up in a dark closet. Camphor, spices, or perfumes, are of no use. Continual darkness is sufficient. And do not take out the furs in June or July to give them an 'airing,' for even then cometh the enemy, who, it may be, in ten minutes after exposure has deposited a hundred eggs. If you consider an airing indispensable, give the furs a good switching."

Game, To Keep.—If there be any danger of birds not keeping until a convenient time to dress them, pick and draw them, wash them well in water, and rub them with salt. Plunge them singly into a large saucepan of boiling water, draw them up and down by the legs, to let the water pass through them.

After they have been in the water for five minutes hang them up to dry in a cold place, sprinkle them with pepper, and salt well inside. Before dressing them, they must be again washed. By this means the most delicate birds may be preserved, with the exception of those that live by suction, as they are never drawn; but they may be kept a long time by putting lumps of charcoal (either animal or vegetable), or a small quantity of mould in muslin bags, in their insides.

Game Licences.—

If licence or certificate be taken out after April 5 and before November 1, to expire on April 5 in the following year £3

To expire on October 31 in the same year in which the licence or certificate shall be taken out £2

If licence or certificate be taken out on or after November 1 to expire on April 5 following... ... ... £2

Games. — See *Buzz, Bouquet, Crambo, Croquet, Clubs, Descriptions, Forfeits, Guimbarde, Gipsies, Odd Sorts, King, Shadow Guess, Twenty-One Questions, Wolf, &c.*

Garden, A FLOATING.—A "floating garden" is a garden floating on water. It is, of course, an artificial affair, and is constructed as an adornment to pleasure-grounds. It is not a difficult thing to make, if one has the pond or lakelet on which to float it. A strong foundation of timber, surrounded with a fence or box, from six inches to two feet in height, according to the depth of soil wanted, and filled with earth, is all that is needed. You can then plant it to suit your taste and fancy, and, by a skilful arrangement of turf and flowers, the boards and timbers can be entirely hidden from view, so that the garden will seem to be a production of nature rather than a contrivance of art. The floating gardens on the lakes which surround the city of Mexico are said to be on an extensive scale, and of marvellous beauty and productiveness. It is also said that there are some peculiarities in their construction which can be only understood on close inspection. (See *Flower Gardens.*)

Gas, THE COST OF, COMPARED WITH OIL AND CANDLES.—If the quantity and quality of the light is considered, there can be no doubt that gas is the cheapest method of illumination yet discovered. If a person has been accustomed to two ordinary candles, he must not expect that a gas pendant will consume gas that will actually cost less than the two candles; on the contrary, the proper way to estimate the expense is to consider, first, the amount of light necessary for the room; secondly, the quantity of light furnished by the pendant; thirdly, original cost, and the wear and tear of apparatus, *versus* candlesticks, grease dropped about the house, accidents from sparks or the neglected snuff from candles. If gas should escape from the pendant or pipes, it is soon discovered by the disagreeable odour. All that is required is to open the doors and windows of the room, to prevent any danger of an explosion. Another advantage attending the use of gas is that the quantity of light can always be regulated: it may be reduced to a degree less than a rushlight, and raised to a degree equal to twenty-five wax or composite candles. The following table will enable any person to decide upon the burner they require, as it gives the number of composite or wax candles, of six to the pound, each is equal to in intensity:—

	5 ft. per hr.	7 ft. per hr.	10 ft. per hr.
Binner's burner ...	15	25	...
Argand (15 holes)	13	19	...
Shadowless (badly drilled)	13	19	...
Double cone ...	13	20	...
Bat-wing	10	13	18
Fish-tail (No. 4)...	10	13	...
Natural	8	...	...
Universal	7	16	...
Large double cone	7	18	22

Gentleman, CHARACTERISTICS OF A. — He is above doing a mean thing. He cannot stoop to a fraud. He invades no secret in keeping of another. He betrays no secret entrusted to his keeping. He takes no selfish advantage of another's mistakes. He uses no ignoble weapons in controversy. He

never strikes in the dark. He is ashamed of slander. He is not one thing to a man's face, and another at his back. If he comes into possession of his neighbour's councils he passes upon them an instant oblivion. Papers not meant for his eye, whether they flutter in at the window or lie open before him in unguarded exposure, are sacred to him. He may be trusted anywhere out of sight. He buys no office, he sells none, he intrigues for none. He would rather fail of his rights than win them dishonourably. He will eat honest bread. He tramples on no sensitive feeling. He insults no man. If he have rebuke for another, he is straightforward, open, and manly. He cannot descend to scurrility. From all profane and wanton words his lips are chastened. To women he speaks with decency and respect. In short, whatever he deems honourable he practises towards every man.

Gentlemen's Clothing.—See *Clothing, Gentlemen's, Hints on the Management of.*

Geraniums, Culture of.—The shrubby kinds of geraniums are commonly increased by cuttings, which, if planted in June or July and placed in the shade, will take root in five weeks. They are the most tender, and when placed out of doors, should be defended from strong winds, and be so placed as to enjoy the sun until eleven o'clock in the morning. As the shrubby kinds grow fast, so as to fill the pots with their roots, and push them through the opening at the bottom, they should be moved every two or three weeks in summer, and the fresh roots cut off.

They should also be newly potted twice in the summer; once about a month after they are placed abroad, and again towards the end of August. When this is done, all the roots outside the earth should be pared off, and as much of the old earth removed as can be done without injuring the plants. They should then be planted in a larger pot; some fresh earth should first be laid at the bottom, and on that the plant should be placed, so that the old earth adhering to it may be about an inch below the rim of the pot; it should next be filled up, and the pot slighty shaken; the earth must then be gently pressed down at the top, leaving a little space for water, to be given without running over the rim; finally, the plant should be liberally watered, and the stem fastened to a stake, to prevent the wind displacing the roots before they are newly fixed.

As the branches grow, and new leaves are formed at the top of them, the lower ones may die, and should be plucked off every week. Geranium slips should be planted in May, June, or July, taking only the last year's shoots, from which the leaves must be stripped. When planted, give them water, and place them in the shade; when they have taken root, let them have the sun in the morning. The slips chosen for cutting should not be such as bear flowers, and they should be inserted about half their length in the earth.

Geraniums, except the shrubby kinds, require shelter from frost only, and should have free air admitted to them, when the weather is not very severe. In sultry weather, they should all be watered liberally every morning, except some few of a succulent nature, which must be watered sparingly; the latter may be known by plucking a leaf from them. Geraniums may be watered three times a week, when not frosty in winter.

German Paste.—An excellent food for birds, much better than what is generally sold under this name, may be made as follows:—Take four fresh eggs and boil very hard, a quarter of a pound of white pease meal, and about a tablespoonful of good salad oil; if the least rancid it will not do. The eggs must be grated down very fine, and mixed with the meal and olive oil. The whole is then passed through a tin colander, to form it into grains, like small shot; then placed in a frying pan set over a gentle fire, and gradually stirred with a broad knife, till it be partially wasted and dried, the test of which will be its fine yellowish brown colour.

Giblet Soup.—The giblets should be well washed in warm water two or three times, the bones broken, the neck and gizzards cut into convenient pieces; the head, also, should be split in

two. If goose-giblets are used, a couple of sets should be dressed; but if duck-giblets are cooked, four sets will be wanted; a pint of water is to be allowed to each set. Put them into cold water, let them boil up gradually, take off the scum, and when they boil, add some sweet herbs, pepper and salt, mace, and an onion. Let the whole stew an hour and a half, or two hours, until the gizzards are tender; take out the giblets, strain the soup, and thicken it with a little flour and a bit of butter, and flavour it with a tablespoonful of ketchup, or Harvey's or Reading sauce. Serve up the giblets and soup together.

Gilt Frames.—See *Frames, Gilt.*

Ginger.—The ginger plant is a native of the East Indies, and is said to derive its name from a mountainous district, called *Gingi*, which lies to the east of Pondicherry. It has become acclimated to the West Indies, where it puts forth its yellowish aromatic flowers in September. The ginger used for preserving is dug up when the stem-shoots do not exceed five or six inches in height; but when it is intended to be dried, the rhizomes, or roots, which are fleshy, or irregularly shaped, are dug up in January—at least, such is the practice in Jamaica, where the plant withers in December. A great amount of care is necessary in the preparation of dried ginger: the best rhizomes are selected, scraped, scalded, and afterwards dried in the sun, for making the white ginger, which is then packed in bags, each containing about one hundredweight. The black ginger is not scraped, but it is scalded previous to being dried in the sun. Good ginger should be heavy, sound, and firm; but if it breaks easily, is tough, or stringy, or soft and worm-eaten, it is bad, and should be rejected.

Ginger, Mocked Preserved.—Boil, as if for the table, small, tender, white carrots; scrape them until free from all spots, and take out the hearts. Steep them in spring water, changing it every day, until all vegetable flavour has left them. To every pound of carrot so prepared add one quart of water, two pounds of loaf sugar, two ounces of whole ginger, and the shred rind of a lemon. Boil for a quarter of an hour every day, until the carrots clear; and, when nearly done, add red pepper to taste. This will be found equal to Indian preserved ginger.

"Gipsies," The Game of.—This will prove a very amusing and merry game, if conducted well, which will depend entirely upon the wit and cleverness of the actors. The persons who invite the party must select, some days previously, one gentleman and two ladies to represent gipsies, and they must not be known to the guests until after the performance.

They will have time to study their parts. If the house has two rooms separated by folding doors, the smaller can be appropriated for a tent, &c., and, where evergreens are plentiful, it may be very tastefully decorated to represent a gipsy encampment, their tent being at the entrance of a wood or copse. It can be easily erected against a wall, and a covering thrown over it, as the gipsies need not go under it, but recline themselves before it. They must prepare suitable dresses, and slightly colour their faces, to appear tanned. When the evening arrives they must be fully prepared. Possibly the guests may take tea before the performance, the hostess taking care not to forget them. When the repast is over, the host may say, "Well, friends, how shall we amuse ourselves?" His wife leaves the room, goes into the other by a side door, and throws open the folding ones. The party appear electrified at the novel sight. The gipsies do not allow them time for consideration, but jump up. The male, taking possession of a young lady, compliments her on her beauty, and begs her to let him tell her fortune. His companions select young gentlemen, and they are told marvellous things.

The host should have invited, at least, one decided old bachelor, two the better. Then the gipsy lasses must praise up matrimony, telling them they would be caught at last, and in their old days rock the cradle, and sing to their son and heir; may even give a description of their intended wives, describing some

of the ladies present, which will cause a great deal of mirth. After the game is finished the gipsies are invited to supper. They do not change their dress, but keep *incog.* during the evening, and after the guests have left, change their dresses, and set off home themselves.

Girls, Practical Training of.—"Who can visit the homes of the poor and not see the utter absence, amongst females, of what is needed to make home comfortable and its inmates healthy and happy?" asks Louisa Twining. "I mean the absence of all knowledge or perception of the following practical subjects:—first, and perhaps foremost, in the list, is cooking; 2, needlework; 3, sanitary matters.

"As to the first, it is almost too trite and well worn a remark to say that English women are without the natural capacity for cooking that belongs, as it seems, to French women. But does not this constitute the greater need to teach it? And how can it be taught in homes where it is not known—where the first and easiest impulse is to feed children on bread and butter and tea, because these things are always ready; and if a piece of meat is given by a district visitor or the parish, it is broiled, or rather dried up to a cinder, with no knowledge how to take it out into a good and satisfying meal for the whole family?

"Then, as to needlework—surely one of the duties of every woman's life—what can we think of the attention paid to it now in *all* schools, from the highest to the lowest? We can only account for the increasing neglect within our own recollection by the prevailing idea that the sewing machine will supersede the necessity of work by the hand; but this is a complete mistake, for, in the first place, the machine is useless without a knowledge of sewing, and then the machine cannot *mend*, neither can it be supposed to be in the homes of the poor.

"It needs not many words to say that all that pertains to the maintenance of physical life and health has been utterly ignored in the teaching of women and girls; and yet what *can* be more important? How often have I listened, bewildered, to the recital, by pauper children, of lists of names of rivers and mountains, and arithmetical problems, all to be forgotten (as I was assured by those who knew results) in six months after they left the school, and found that their *practical* training was confined to a little needlework (of course) and to the scrubbing of the floor of their bare schoolroom and dormitory!

"The ignorance of cooking deteriorates the health of the family, especially the children, and, more likely than anything else, creates the craving for drink which too often sends the husband to the public-house, where something satisfying, at least for the time, is always ready.

"And then the ignorance of mothers about the care of their infants! Would it not be better to teach them the laws of life and health, even 'lessons in physiology' and the structure of their own and their children's bodies, than the names and lengths of rivers and heights of mountains that they will never see?

"I cannot attempt to go into details, but I may ask why at least half the day of teaching should not be devoted to the attainment of some of the arts or duties I have alluded to? Why should not a public kitchen be attached to every National School, at which numbers in every parish would be thankful to procure well-cooked food for themselves and sick neighbours, and in which each girl in turn should have the opportunity of acquiring competency and gaining prizes? As to needlework, I need not stay to point out the easy methods of accomplishing *that* problem, to the exclusion of fancy work, whether 'moss mats' or any other kind. If a sufficient supply cannot be provided by the girls from their own or their families' stores, dresses and other garments should be taken in to be made, and no girl should leave the school till she could cut out and make them.

"And lastly, for the teaching of sanitary matters, and, more especially, the care of children, I do not see why a 'nursery' should not also be connected with the school, to which the baby brothers and sisters might be brought, to be fed, and washed, and cared for, and *washed for* by their elders. I mention this last branch of useful learning now,

though I have not named it before, because this is a branch of work rapidly becoming ignored by servants and girls of the lower class—so much so, that it has been heard as a complaint from working men, that their wives do not know how to wash for them. If 'home' is to maintain its ascendancy as one of the boasts of English life, we must look to these things; and let us not delude ourselves with the idea that the cultivation of the intellect alone will cure our social evils.

"Surely in some respects we need to retrace our steps to the paths of our grandmothers, instead of looking back on them with contempt and scorn. The nineteenth century talks fluently of 'the beautiful, the true, the good,' and despises those who have not at least a smattering of knowledge and a show of accomplishments. But let us beware, lest in this worship of the intellect we lose the domestic virtues for which English girls have hitherto been famed. We dare not begin to speak of our fears for the future of our countrywomen, or of the symptoms of decline which we think we perceive in the present; but a glance at the hairdressers' shops alone may surely convince us that neither the 'beautiful' nor the 'true' so much spoken of can be the ruling and prevailing principles of the minds of girls, when a *false show* becomes familiar to all classes. I am tempted to doubt if there can be 'truth in the inward parts' when I see folly and falsehood thus stamped even upon the outward appearance."

Glass, The Table.—Nothing has a more pleasant effect upon the dinner table, or sets it off to greater advantage, than good glass, carefully cleaned, and sparkling in brilliancy. When of a fine quality, and well cut and polished, it is most beautiful. Like table linen, all the glass should be of one pattern. Unhappily, chiefly from its liability to break, it is a very expensive item in housekeeping. Next to the engraved and polished glass in imitation of the old Venetian, is that perfectly plain, neither cut nor engraved, but polished. But all is beautiful, and it is only necessary to avoid that which is blown and moulded. The decanters and claret jugs, tumblers, goblets, wine glasses, hock and champagne glasses, water bottles, liqueur frame and glasses, should all correspond, and be of the same form, style, and pattern; for any difference in pattern or style destroys the harmony of your table. Upon no account mix good and common glass together—the one eclipses the other, and shows the poverty of the land.

To Clean Cut Glass.—After washing let them thoroughly dry; and then polish them with a soft brush and prepared chalk, taking care that the brush goes into the cavities and flutings.

Glass Seals.—Nothing is so easy to make as these really useful and durable articles. First, procure a mould made of plaster of Paris, the exact counterpart of the seal wished for, and this may be made by pouring a mixture of plaster of Paris and water, of the consistence of cream, upon any engraved seal, previously slightly oiled; when set, remove the cast and let it thoroughly dry, when it will be fit for use: then place in the centre of a clear fire a bit of flint glass, holding it with a pair of iron pincers, being careful to hold it so as not to touch any of the black coals. When of a red, or still better, of a white heat, take it from the fire, lay it upon the mould, and press upon the back of it so as to force it into all the depressions, and thus the seal is made. To finish it, it only requires to be ground round the edge into shape. If it be desired to imitate a sealing-wax impression, it is necessary to oil it, pour common wax upon it, and take the plaster cast from this. The makers of glass, or, as they are called, composition seals, usually melt the glass in a crucible, taking out a sufficient quantity with an iron rod. Their moulds also have usually a ridge, or frame, of plaster round them, to ensure the proper shape at once, without after-grinding.

Glass, To Engrave on.—Take a piece of glass perfectly clean, cover it over with beeswax. When the coating is sufficiently dry, trace out upon it with a sharp-pointed tracer, or needle, the design intended to be engraven, taking care that all the lines are marked through, so

that the light can be admitted; then take one part of powdered fluor spar, which place in a leaden bason; add two parts of sulphuric acid; lay the glass, with the engraved side downwards, on the bason; place the vessel over a lamp for a few minutes, until white fumes are disengaged from the mixture; withdraw the lamp, and suffer the glass to be corroded by the action of the white fumes, which will be completed in ten minutes; remove the wax with oil of turpentine. After this operation the design will be accurately represented on the glass.

Glass, To Prevent being Broken by Hot Water.—No person would be so indiscreet as to hazard the breaking of glass by pouring hot water upon it, if he understood the simple means of accounting for its destruction. It is as follows: If hot water be poured into a glass with a round bottom, the expansion produced by the heat of the water will cause the bottom of the glass to enlarge; while the sides, which are not heated, retain their former dimensions, and, consequently, if the heat be sufficiently intense, the bottom will be forced from the sides, and a crack or flaw will surround that part of the glass by which the sides are united to the bottom. If, however, the glass be previously washed with a little warm water, so that the whole is gradually heated, and, therefore, gradually expanded, then the hot water may be poured in without danger; because, although the bottom will expand as before, yet the sides also enlarge, and the whole vessel will undergo a change of heat.

Glass, To Put Labels on.—Paste the label with bookbinder's paste, by means of a small brush, applying a coating as thick as a piece of thick paper. Let it stand a minute or two to soak in; then rub nearly the whole off with the finger, seeing that it is merely moist all over, and apply it at once to the glass bottle, stretching it in its place by means of the thumbs placed at each side; then cover it with a piece of paper to keep it clean, and secure all immovable whilst rubbing hard with the hand to make it smooth. (See *Paste.*)

Glass, To Write on.—Glass is written on (so as to be invisible until breathed upon) with hydrofluoric acid. Dip a quill pen into the liquid, and write upon the glass as if you were using ink. Let the writing remain for about two minutes; then wash the glass in clean water, and polish with a silk handkerchief. The writing will be now quite invisible; but if breathed upon, the characters will be very distinct. Hydrofluoric acid, as it eats into glass, is kept and sold in leather bottles.

Glass Windows, To Crystallise.—Make a hot, saturated solution of Epsom salts, or, still better, of sal-ammoniac. Wet the glass windows with this solution, laid on equally with a paint-brush. The moisture will evaporate, and the salt be deposited.

Glycerine.—This is an oily-looking, almost colourless fluid, which has, of late, come very much into use as a therapeutic agent. It is a waste product of the fatty matters employed in the manufacture of candles, and in that of soap-plaister. It does not readily evaporate at the ordinary temperature, and, therefore, forms a moist and pleasant covering for the skin in many of its diseases. Its healing as well as protective properties render it peculiarly applicable as a dressing for bruised or excoriated surfaces, to which it may be applied with a camel-hair brush. "Where there is harshness, dryness, or a scurfy state of the skin" (we extract from *The Family Doctor*), "a lotion composed of glycerine one part, to fifteen parts of plain, or elder-flower water, is very serviceable. For chapped hands, cracked lips, &c., we can recommend the following glycerine paste:—First dissolve one drachm of powdered borax in one ounce of rose-water, add to it half an ounce of glycerine; melt one drachm of spermaceti in the same of olive oil, and ten drachms of pure lard; add the solution to the fat little by little, stirring all the time, and continuing to do so until nearly cold."

In deafness, and other affections of the ear, glycerine has also been found serviceable. It has been applied to burns, mixed with poultices, to keep them moist; and even administered in some cases of dysentery, both as a medicine and enema; the former being twelve drachms of

glycerine in six ounces of orange-flower and plain water, equal parts; dose, two tablespoonfuls every hour; and the latter, glycerine one ounce, added to five ounces of decoction of bran or linseed, to be thrown up twice a day. If this article is pure, it has scarcely any perceptible smell, and only a sweet, mawkish taste.

God, The Name of, in Forty-eight Languages.

Hebrew, *Elohim or Eloah.*
Chaldaic, *Elah.*
Assyrian, *Ellah.*
Malay, *Alla.*
Arabic, *Allah.*
Language of the Magi, *Orsi.*
Old Egyptian, *Teut.*
Armenian, *Teuti.*
Modern Egyptian, *Teun.*
Greek, *Theos.*
Cretan, *Thios.*
Æolian and Doric, *Ilos.*
Latin, *Deus.*
Low Latin, *Diex.*
Celtic and Old Gallic, *Diu.*
French, *Dieu.*
Spanish, *Dios.*
Portuguese, *Deos.*
Old German, *Diet.*
Provencal, *Dion.*
Low Breton, *Done.*
Italian, *Din.*
Irish, *Die.*
Olaia tongue, *Deu.*
German and Swiss, *Gott.*
Flemish, *Good.*
Dutch, *Godt.*
English and Old Saxon, *God.*
Teutonic, *Gott.*
Danish and Swedish, *Gut.*
Norwegian, *Gud.*
Slavic, *Buch.*
Polish, *Bog.*
Polaca, *Bung.*
Lapp, *Jubinal.*
Finnish, *Jumala.*
Runic, *As.*
Pamonian, *Istu.*
Zemblian, *Fetizo.*
Hindostanee, *Rain.*
Coromandel, *Brama.*
Tartar, *Megatat.*
Persian, *Sire.*
Chinese, *Prussa.*
Japanese, *Goezur.*
Madagascar, *Zaunar.*
Peruvian, *Puch Ocamal.*

Gold-Fish, Their History and Treatment.—These beautiful fish are natives of China. The years 1611, 1691, and 1728 are respectively recorded as the precise period when they were first brought to England. It is probable that they were brought at the two earlier dates, but becoming extinct, they were subsequently re-introduced at the later period. France acquired them later.

The Chinese are exceedingly fond of keeping gold and silver-fish, which are identically the same. The choicest and most beautiful kinds are taken from a small lake in the province of Che-Kyang. Every person above the lowest class keeps them for amusement, either in beautifully-decorated porcelain vessels or in the small basons that ornament the courtyards of the Chinese houses.

It was long supposed that gold-fish would not breed in this country, but it is now well ascertained that they will freely multiply in small ponds, or even tanks, if a few fagots are thrown in so as to afford sheltered places for them to deposit their spawn; more particularly so if the temperature of the water can by any means be maintained at an elevation above the ordinary mean.

The extreme elegance of form of gold-fish, the splendour of their scaly covering, the ease and agility of their movements, and the facility with which they may be kept alive in very small vessels, place them in the first class of our most pleasing and desirable domestic pets. Indeed, few objects can be more ornamental or amusing than a glass globe containing gold-fish. The double refraction of the glass and water represent them when in motion, in a most beautiful variety of sizes, shades, and colours, while the two mediums, glass and water, assisted by the concavo-convex form of the vessel, magnify and distort them.

Some persons, however, exhibit their gold-fish in a very extraordinary manner. They have a hollow globe in the interior of the one containing the fish, and in this hollow globe they put a canary, or other small bird, which appears to be hopping in the midst of the water, while the fish are swimming in a circle round it. This conceit, as our ancestors would have termed it, is tasteless and unnatural, and in an æsthetic point of view, richly deserves the severest reprobation.

Though gold-fish are seen to the greatest advantage when kept in glass globes, yet we regret to be compelled to say that they are very unsuitable dwellings for them. Let us consider for a moment the conditions which are absolutely necessary for the health and even the existence of fish, and we shall find that a glass globe, however beautiful they may appear in it, is one of the most inappropriate of vessels for keeping them in. In the first place the fish require abundance of air. Now, scarcely any

other shape than a globular one contains so much water with so little exposure to the air. Fish, too, require shade, not when we choose to give it to them, but when they feel the want of it; and it need scarcely be observed that all day long a glass globe is in a blaze of light. Still more, the water in a globe must be daily changed, consequently the fish must be lifted out either by the hand or a small net; and it is utterly impossible, however careful we may be, to handle or net these delicate little struggling creatures without injuring them at one time or another. Indeed, we find—and we have had no little experience in the management of gold-fish—that when we take a few from our store pond and put them in globes, they very soon begin to lose their brilliant colours, become diseased, and die. The large dealers in these fish are well aware of this fact, and keep constantly shifting from the pond to the globe, and *vice versâ*.

Where there can be a contrivance made for letting in a flow of water, be it ever so small, say a drop a minute, in and out of the vessel containing the fish, the water will not require to be changed; and a small water plant, say the very curious *vallisneria spiralis*, would afford the required shade. The most interesting and eligible method of keeping gold-fish, without doubt, is the aquatic vivarium invented by Mr. Warrington.

But as a globe will be ever the most popular domicile for these fish, we shall give a few directions how they should be treated in it. When purchasing a globe, procure as wide-mouthed a one as possible, and subsequently never let it be more than three-parts full of water. By these means you will secure as much air for the fish as is possible under the circumstances. Keep the globe also in the most airy part of the room, never letting it be in the sun or near the fire. Change the water daily, and handle the fish tenderly when doing so. We cannot say which is best for this purpose, the net or the hand, but advise our readers to use that which they find the best. Never give the fish any food —all they require when in a globe is plenty of fresh air and fresh water—they will derive sufficient nutriment from the animalculæ contained in the water. Numbers of people kill their gold-fish by giving them bread. Now, we do not deny that bread is good for gold-fish, and that they will eat it, but the uneaten crumbs immediately turn sour, and deteriorate the water, to the great injury of the fish.

Two diseases, being the most frequent, may be pointed out as the principal ills which it is the lot of gold-fish to be heirs to. Sometimes a fish seems less lively than usual, and, on a close inspection, will have a sort of mealy look, and, in a day or two, this mealiness will turn out to be a parasitical fungus. We have heard of several remedies for this very mysterious disease, but there is absolutely nothing for it but to take the fish, at the first appearance of the disease, and throw it away, for it will not recover, and it will only infect the others. We would, however, advise the inexperienced gold-fish keeper, whenever a fish seems unhealthy, to place it by itself for a few days: he will then see whether the fungus makes its appearance; if not, the fish may recover, and be returned to the globe.

The other disease is apparently an affection of the air-bladder, arising from being supplied with too little air. We have found fish recover from it when removed from the globe and placed in a pond. When under the influence of this disease, the fish swims sideways, with its body bent as if its back were broken, and in a short time dies. Whenever these symptoms are observed, the fish should be placed in a large tub of water, and a small stream of water allowed to drop into it. The water, through dropping, becomes more aërated, and the fish, thus receiving an abundant supply of air, will frequently recover.

The variety of colours among gold-fish are, in all probability, principally caused by their being a sort of semi-domesticated animal. The rabbit, pigeon, duck, and many other animals, when domesticated, lose the distinctive markings of their race, and assume a variety of other colours. The young gold-fish, also, are at first dark-coloured, indeed, nearly black, changing more

or less rapidly according to their constitutional power. Besides, we have reason to believe that the silver-coloured fish are most generally old ones.

When gold-fish are bred in ponds, under favourable circumstances, the young will attain the length of five inches in the first year; but their subsequent growth is much less rapid. The largest we have heard of, from an authentic source, did not exceed ten inches in length; the largest we have seen only measured nine.

Goloshes. — See *Gutta Percha Soles.*

Gordian Knot.—This was a knot made by Gordian, in one of the ends of his yoke, or, as some have it, in the leathers of his chariot harness, which was so very intricately twisted, that it was impossible to discover where it began or ended. The oracle of Apollo having declared that whoever should untie the knot should be master of all Asia, many attempted it, but without success, till, at last, Alexander the Great, after attempting in vain to untie it, cut it asunder with his sword, and thus either eluded or fulfilled the prediction.

"Grasshopper and the Ants," Game of.—This is an excellent amusement for a juvenile company. In the first place, lots are drawn to decide which one of the company will take the part of the grasshopper, all the rest being termed ants. The grasshopper, when thus appointed, writes, with a pencil, on a piece of paper, the name of some edible grain; then, folding the paper in her hand, goes to the ants, who are seated in a circle, and, making a most respectful obeisance, says, "My dear friends and good neighbours, I am very hungry, I pray you give me some food." Then, particularly addressing the first ant, she continues, "You, my dear, who are so very charitable, what will you give me?" The ant replies, "I have only a grain of rice (or any other grain), which is at your service." The grasshopper then says, "Thank you, my dear," and passes to the next ant, and the others in succession. If none of the ants mention the grain written on the paper which the grasshopper holds, the latter pays a forfeit, and the game is again commenced in its second stage, as will be presently explained; but if one of the ants pronounces the fatal word, the grasshopper says, "I accept your offer, my kind neighbour; may Heaven reward you!" and showing the paper with the same word, the grasshopper takes the place of the ant, and the latter, paying a forfeit, becomes the grasshopper. (See *Forfeits.*)

In the second stage of the game, the newly-made grasshopper writes the name of a dance on a piece of paper, and says to the ants, "My kind friends, thanks to your benevolence, my hunger is appeased, and now I wish to dance; what dance will you recommend?" The ants, interrogated in succession, mention several dances, as the waltz, polka, minuet, &c., until one, naming the dance written on the paper, is compelled to pay a forfeit, and becomes the grasshopper.

The third grasshopper then writes the name of a musical instrument on the paper, and says to the ants, "My friends, I am much obliged for your kindness, but as I dislike dancing without music, what instrument would you advise?" The ants, in turn, mention the harp, violin, piano, &c., until the instrument written down is mentioned, and the result is as in the preceding instances.

The next grasshopper says, "I have danced until I am tired, and now wish to go to sleep; under what leaf would you advise me to make my bed?" Each ant, interrogated in turn, replies by naming the leaf of some flower, and the game goes on as before.

The amusement of this game is greatly enhanced by the ingenuity of those engaged in it, and the pertinence of the interrogations bearing on the natural history of grasshoppers and ants.

Grayling, The, or **Umber.**—These fish spawn in May, and are in the best condition in November. They will greedily take all the baits that a trout does, and frequent the same streams. They are said to have the fragrant smell of the plant Thymallus. Their average length is from 16 to 18 inches. They must be angled for with very fine tackle, as they are a remarkably timid fish. When

hooked, they must also be cautiously worked, as the hold in their mouth easily gives way; but they will speedily return to the bait. It is fine eating. Unknown to Scotland or Ireland. (See *Trout.*)

Greengages, To Preserve.—The most ready and economical method is the following:—Pick and prick all the plums; put them into a preserving-pan, with cold water enough to cover them. Let them remain on the fire until the water simmers well; then take them off, and allow them to stand until half cold, putting the plums to drain. To every pound of plums allow one pound of sugar, which must be boiled in the water from which the plums have been taken; let it boil very fast until the syrup drops short from the spoon, skimming carefully all the time. When the sugar is sufficiently boiled, put in the plums, and allow them to boil until the sugar covers the pan with large bubbles. Then pour the whole into a pan, and let them remain until the following day. Drain the syrup from the plums as dry as possible, boil it up quickly, and pour it over the plums, then set them by; do this a third and fourth time. On the fifth day, when the syrup is boiled, put the plums into it, and let them boil for a few minutes; then put them into jars. Should the greengages be over ripe, it will be better to make a jam of them, using three-fourths of a pound of sugar to one pound of fruit. Warm the jars before putting the sweetmeats in, and be careful not to boil the sugar to a candy. (See *Fruit Jars.*)

Green-House, Economical.—Much of the produce of the green-house may be procured at half the expense by the use of the pit, which requires no other glass than the sashes which form its roof. The amusement and the products which such a pit, in the hands of an ingenious amateur, is calculated to afford, are almost without end. Small salading may be produced in it throughout the whole winter. Chicory roots, (though this may be accomplished in a common cellar) may be made to throw out their blanched leaves, which form the most delightful of all winter salads; tart rhubarb or seakale may be forced in pots; as may parsley, mint, and other herbs. Bulbs may be forced, and a bloom of China roses may be kept up throughout the winter. But perhaps the most important use to which such a pit can be applied in a small suburban garden is, to preserve throughout the winter, and to bring forward in the spring, fuchsias, salvias, verbenas, and other fine exotic flowers; and also half-hardy and tender annuals, for turning out into the flower-garden or into the miscellaneous border in the beginning of summer.

Groats, Embden.—See *Gruel.*

Grottos, To Make Coral Branches for the Embellishment of.—Take clear rosin, dissolve it in a brass pan, to every ounce of which add two drachms of the finest vermilion; when stirred well together, choose the twigs and branches, peeled and dried; then take a pencil and paint the branches all over while the composition is warm; afterwards shape them in imitation of natural coral. This done, hold the branches over a gentle coal-fire till all is smooth and even, as if polished. In the same manner white coral may be prepared with white lead, and black coral with lampblack. Grottos may be built, with little expense, of glass, cinders, pebbles, pieces of large flint, shells, moss, stones, pieces of chalk, artificial coral, &c., all bound or connected together with the above-described cement.

Gruel.—This common and nutritious food for the sick-room, how few persons know how to make it smooth and palatable! There are two ways of preparing gruel; one from the whole grain, whether oat, barley, or rice; the other from meal. The former is generally preferred as most delicate and secure from adulteration; the latter is more convenient when wanted quickly. There is no nicer gruel than that made of whole oats, with merely the husks removed or once flattened by passing through a mill. The former are called whole groats; the latter, cracked, or Embden groats; the fresher they are used the better. If kept at all after being cracked, it should be in a closely-shut vessel, whether glass, earthen, or tin, and in a very dry place. The Embden groats done up in paper soon become sour.

The coarse Scotch oatmeal, and fine oatmeal, purchased by measure of an honest mealman, are greatly preferable to those called "prepared," and sold in paper packets. Whether it is owing to the "preparation," or the mode of keeping, it is hard to obtain from the latter article good, well-flavoured gruel.

For groat gruel the whole or cracked groats should be set on with cold water, and a sufficient quantity of it to allow for at least one-third of it boiling away. It must be frequently stirred, and must not be suffered to boil over. It is not merely the quantity actually spilt that is wasted, but in the early stage of the process the most nourishing part of the grain rises in the form of scum, which afterwards sinks, and enriches the whole.

A quarter of a pint of groats will make one quart of thick gruel, being set on with three pints of water, and boiled three quarters of an hour; then strain. The groats may be boiled again with rather more than a pint of water put to them boiling, and will produce nearly another pint of gruel.

For meal gruel one large spoonful of oatmeal (either Scotch or fine); mix it very smoothly with two tablespoonfuls of cold water. Stir into it a pint of water boiling on the fire. Let it boil briskly ten or fifteen minutes; strain off.

For either sort of gruel a bit of fresh butter and a little salt may be stirred in, or a little sugar and nutmeg, according to taste.

Rice gruel may be made of ground rice just in the same manner. As this description of gruel is generally prescribed when the bowels are in a disordered state, it is of special importance that the rice be perfectly pure, and in good condition. Persons who often use ground rice will do well to have a mill, and grind it at home as wanted. A stick of cinnamon, or a few chips of dried Seville orange peel, may be boiled in the gruel for flavour. If rinsed and dried they will serve two or three times in succession. When strained, sweeten with loaf sugar, and add a grate of nutmeg.

Rice gruel is sometimes ordered to be made with port wine or brandy, and it is possible for a sick person to be in such a state as to render their additions suitable; but they should never be used but in cases of emergency, and under medical direction. In most cases they would do no good, but would probably do great harm. The same remark applies to the use of wine or spirits in arrowroot or gruel. In ordinary cases it is best to leave them alone.

Thick gruel, whether of oat, barley, or rice, may be thinned with new milk, and is a very nourishing and agreeable food, when any particular disorder does not render it unsuitable.

Gudgeon.—These fish are in some request, both for their flavour and the sport they afford to the inexperienced angler. It is very simple, and is allured with almost any kind of bait. It spawns two or three times during the year; is generally from five to six inches long, and fond of gentle streams with a gravelly bottom. In angling for gudgeon the bottom should be previously stirred up, as this rouses them from a state of inactivity, and collects them, in shoals, together. Some anglers use two or three hooks in angling for gudgeon. A float is always used, but the fish should not be struck on the first motion of it, as they are accustomed to nibble the bait before they swallow it. It frequently happens that, in angling for gudgeon, perch are caught.

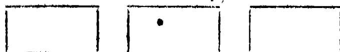
Guimbarde, the Bride, Game of.—Several persons, from five to nine, may play at this game, if more than six play, they use an entire pack of fifty-two cards; but if there are only five or six players, all the small cards to the six or seven are thrown out, provided, of course, that there are enough cards left to deal with.

Each player is to have two dozen or more counters, and each counter bearing a fixed value, according to agreement.

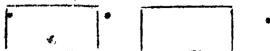
Five boxes, the shape and size of a card, are to be provided, and ranged upon the table, as follows; one for the Guimbarde, who is the bride; another for the king; a third for the fool; a fourth for the marriage; and the fifth for the point.

Here is the plan of arrangement:—

The Point. *The Marriage.* *The Fool.*



The King. *The Guimbarde.*



Every player puts a counter into each box and then deals round for the deal; the first knave to deal. The person that deals, first shuffles the cards, then hands them to the player on his *left* to cut them, after which, he deals five cards to each person by three and then by two, and then turns up the top card, which is the trump. The *point* consists of three, four, or five cards in the same suit; one or two cards do not make a point. The higher always takes the place of the lower; and when there are two equal points, the elder hand wins it.

The *marriage* is when the king and queen of hearts are in the same hand; and this is a very great advantage.

The *fool* is knave of diamonds.

The *king* is the king of hearts, so called by way of pre-eminence, as being the husband of Guimbarde, who is the *queen* of hearts.

After every one has received his five cards, and the trump is made, they then examine their hands to see if they have any advantages stated above, as the king, the Guimbarde, or the fool; they may have all five in the same hand. For example, a player may have the king and queen of hearts, the knave of diamonds, and one or two more hearts to make the point; and if so, he proceeds as follows: 1st. He takes the box with point. 2nd. The box with fool for the knave of diamonds. 3rd. The king's box for the king of hearts. 4th. The box of Guimbarde for the queen of hearts; and 5th, the marriage box, because he holds both the king and queen of hearts.

If you only hold the king, Guimbarde, or the fool, singly, or either of the others, show your cards, and then take the box of counters. Every one calls his point, and the highest draws it, as stated before.

After the point is drawn, every player puts a counter into the same box, and that is the stake won by him that makes the most tricks; to win the cards you must make at least two tricks; for if every one makes one trick, the stake remains in the box and serves for the point of the next deal.

If two players make each two tricks, the cards are won by him that makes the first two.

The Guimbarde is always the principal trump in the game, in whatever suit the trump is made. The king of hearts is the second, and the knave of diamonds is the third; these three never change, and the other cards have all their common value, with the exception of the ace, which is of less value than the knave, and more than the ten, nine, &c.

The oldest hand begins to play, by leading such a card as he considers best; and the game is carried on by each one playing for himself, and endeavouring, by all means, to make two tricks, or more if he can, in order to win the cards.

There are other marriages in the game besides that of Guimbarde. For example, when any one plays the king of spades, clubs, or diamonds, and the queen of the same suit falls to him, then this marriage stands good as well as that made by the cards in hand.

If there should be a marriage made in play, the person that wins it receives a counter from each player, except the person that played the queen; but if the marriage is made in hand every person has to pay.

The player that wins a marriage in trumps, receives a counter from those that played the king and queen.

A marriage cannot be trumped with the king or queen of hearts, or knave of diamonds.

When a player has the grand match in hand (the king and queen of hearts), he receives two counters from each player, in playing the cards, besides the boxes of counters from the table; but when it is made on the table, the players only pay one counter. For example, when the king of hearts is won by Guimbarde, which is the only card that can win the king of hearts.

Any person playing the fool, receives one counter; but if it should be taken by the king or queen of hearts during the

play, he does not receive anything; on the contrary, he has to pay one counter to the player that takes him.

To constitute a marriage in play, the king and queen of the same suit must fall directly on one another; if otherwise, the marriage cannot be allowed.

Any person holding the king or queen that is to be played in his hand, must play it immediately after the other card, so as to make a marriage; and if this is neglected, the player omitting to do so must pay a counter to each player at the table.

Any player renouncing, must pay a counter to each person.

Any person neglecting to face or trump a card when he can do so, forfeits a counter to each player.

Any player dealing wrongly is to pay a counter to each person, and deal again; and if he makes a like mistake, the fine is to be repeated for each misdeal.

When the pack is false, or has a card facing the dealer, and it is discovered during the play, the deal is to be declared void; but if the deal is finished, it is to stand good, and also the preceding ones.

Any player playing out of his turn is to pay a counter to each person.

Gutta Percha Modelling.—This is the greatest novelty of the day, combining utility with elegance, for by the aid of the beautiful enamel colours, an ordinary white china cup and saucer can be made to represent the old china, with its quaint raised blossoms, figures, birds, leaves, &c. Pretty card baskets may be entirely moulded out of the gutta percha; ancient china frames to hold mirrors, old-fashioned gilt frames which are tarnished, seemingly only fit for the lumber-room, can, by the aid of the white enamel, be made to represent the purest white china, with a wreath of the passion-flower, either scarlet, crimson, blue, or the so-called white, with its rays of purple shading to blue, resting with their dark green, glossy leaves and light green tendrils upon the frame. Wood, stone, and leather, besides gutta percha, can be made to represent china in all its varieties, by the aid of the white and beautiful tinted enamels, which can never be displaced from the article painted with it, except by the use of turpentine, and that with great difficulty.

The materials required for the art of gutta percha work are but few, and as follows:—The purest white gutta percha, which is sold in sheets, and by the pound, the thickness of it should be less than a quarter of an inch, and quite smooth on its surface. Enamel colours in bottles, consisting of white, deep rose, crimson, pale pink, blue, three shades of green, orange, scarlet, yellow, mauve, violet, and two shades of brown; a pair of sharp-pointed scissors, and several wooden moulds for leaves, &c.; together with six camel-hair brushes of different large sizes, and six of the sable brushes, from the medium to the finest, for veining and tinting tiny blossoms, butterflies, birds, &c. Three sizes of copper wire, from the fine for stems of leaves and flowers, to the medium thick for centre stems, stalks of large flowers, &c., where strength is required, a pair of small pliers, cutting knife and veining tool. The tools and materials required for this ornamental art are to be obtained from Messrs. Barnard and Son, 339, Oxford Street.

To soften and mould the gutta percha, a piece of it should be dipped into boiling water, and instantly taken out again, and then stretched and moulded with the fingers into a thin, smooth surface, and whilst warm and pliable, moulded or pressed on to the article required.

The leaves should be formed from the gutta percha whilst warm, by pressing a real leaf upon it, that the impression of it may be obtained upon its surface, and then as quickly cut out with the scissors, and moulded with the fingers into natural form. Another, and equally as good a way, is to get a smooth piece of wood, and after placing the natural leaf or spray of leaves upon its surface, trace with a pencil round the outer edge, then remove the leaf, and cut sharply round the edges with a penknife, to the depth of the sixteenth of an inch, slicing as it were the piece in the form of the leaf out of the wood, then with a pencil trace the veins of the natural leaf upon the indented outline which is on the wood, doing it with

great care and precision, after which cut the lines out with the knife. We give this mode because it saves much time and trouble, especially to those living in out-of-the-way places, where moulds would be difficult to procure; all that remains to be done is to warm the gutta percha, and while it is soft, press it upon the indented mould, when, upon being removed, it will be found to bear upon its surface an



AN ANTIQUE FRAME IN GUTTA PERCHA ENAMEL.

exact copy of the veins and outline just formed upon the wood. The leaf should then be moulded with the fingers, by bending or crinkling, according to the style of the leaf copied.

The flowers are simply formed from the warm gutta-percha, after pressing it out to the even thickness of the real flower intended to copy. Each petal should be, as in wax, cut and moulded

from nature. If for a rose, or any other many-petaled flower, the sizes should be cut, moulded, and regulated in their order before making up.

The stems and tendrils are formed of wire, covered smoothly with gutta percha.

AN ANTIQUE FRAME IN GUTTA-PERCHA AND ENAMEL TO REPRESENT CHINA.—*Practical Instructions:*—Get any old frame of an oval shape, and to form the beading cut a rather long slip of gutta percha the depth of wooden

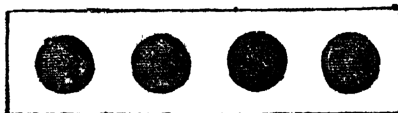


FIG. 1.

mould Fig. 1, then, after warming it well, press on to the mould just mentioned, and when the gutta percha is removed it will be found to bear upon its surface the little raised knobs desired; continue by warming and pressing on to the mould until the whole length is beaded; when completed cut the edge on either side even, and after warming the back of the beading just formed, press it on to the edge of the frame, smoothing the edges whilst warm, even to the wood. The inner and smaller beading should be formed in like manner, only using the wooden mould, as seen in the diagram Fig. 2. When the two beadings are neatly and firmly fixed to the wooden frame, it must next have a thick coating in all parts of the white enamel, put on with a large camel-hair brush. If, when quite dry, the enamel does not cover all alike, it should have another coat. It is now ready for the true lover's knot and wreath of daisies, which must be formed of gutta percha. The knot is composed of a ribbon formed of a strip of gutta percha, from 12 to 15 inches in length, according to the size of the frame, about half an inch in width and half a quarter in thickness; warm it,

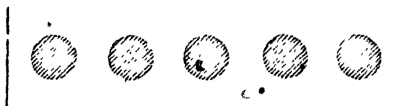


FIG. 2.

mould it at the edges and ends, stretch it slightly if necessary, and then tie in a careless bow loosely, exercising taste and judgment. The ends can either be left to droop as a plain ribbon, or by a little moulding with the fingers, be made to represent crinkled or raised ribbon, the bows corresponding. The bow should now be enamelled, first with white and the small sable brush, taking care to go into every turn and crevice, as well as the edges and backs; and, when quite dry, enamel again with either a pale rose pink or a rich mauve; either colour would go well with the daisies and leaves which wreathe the remainder of the frame. The bow should now be fastened on to the top of the frame (as shown in our illustration) with the tiny pins, being careful that they are not visible; any that should unavoidably be seen must be tinted slightly with the colour, blending it with the rest carefully.

The Daisy Spray for the Frame.—First soften a piece of gutta percha, about two inches square; it is always best to soften a small piece at a time, just enough for several petals or leaves, as it hardens so soon after leaving the hot water. When stretched out to the fineness of nature, place the paper pattern upon the gutta percha, and cut out two pieces, if for a double daisy, which looks prettier than the single, and which should be done very neatly with the scissors; then warm the pieces just formed by the fire or a spirit lamp, and vein each little point at the back, with the veining tool, or a fine knitting

pin would do as well, and pierce in the centre of each piece. The leaves should next be formed, either from nature or as before described, by pressing the warm gutta percha upon the wooden mould, making each the thickness of nature, and bending them naturally back, or curling them according to the real ones. The number of leaves and blossoms required must depend upon the size of the frame—one to seven leaves to each daisy would look very pretty, but of course taste and judgment must be exercised. To make up the flower, take a strip of fine wire, and mould round one end of it a tiny piece of gutta percha; turn down the end, and mould another small piece, turning and moulding it, between the finger and thumb, to a small round knob the natural size of the centre of a wild daisy; then slightly warm one of the two pieces for the flower, and passing the wire through its centre, press it to the base of the little knob or centre of the flower; then, after regulating each point, pass the wire through the other piece, arranging it so that the point of the first comes between three of the latter; each little point should be pinched and be made to stand out as in nature. The calyx should be passed up and tinted light green. The stem should then be covered thinly with gutta percha, by moulding a very narrow strip round the wire, close up to the base of the petals. The leaves should then be warmed at their base, and pressed on to the stem of the flower, according to nature. They should be left to get quite hard after moulding them, and they will then be ready for the first coating of enamel, which should be used thus:—Into a small basin pour a little of the white enamel, after shaking the bottle well up, then with a small sable brush, which should be kept entirely for the white, paint most evenly the back and front of each petal and leaf, as well as the stems. Care should be taken not to put too much of the enamel on, or it will look unnatural. When the enamel looks too thick for minute objects, it should be diluted very slightly with rectified spirits of turpentine. The spray should then be placed upon a plate or thin sheet of tin to dry. When *quite dry*, which can be told by finding it quite smooth and glossy, as a piece of china when hardened, the spray will then be ready for

THE ENAMEL TINTING,

which should be done with the sable brushes and coloured enamels. The eye of the daisy should be painted most carefully with the yellow, and a fine sable brush for the purpose, taking care not to touch the white petals, but to entirely and evenly cover the eye or little centre knob. The daisy leaves should be painted smoothly with the bright yellow green, tinting each from the centre to its base with a lighter shade, which can be produced by mixing the smallest particle of white and yellow with the green. The leaves should not be all of the same shade, but varied as in nature, always remembering that their backs should be several shades lighter. The tips of the daisy petals can, if preferred, be tinted with crimson. When dry this little spray is suitable for many ornamental purposes, besides frames, baskets, inkstands, pen-wipers, &c.

The daisy wreath is simply composed of a succession of the daisy sprays, the method of making which has been already shown, fitting each little spray within the other, as seen in our illustration of the frame. The pins can easily be hidden in arranging the wreath within the beading by tinting them with the tiny specks of dark or golden brown, so often seen in nature.

Gutta Percha Soles, to put on Goloshes.—For the following excellent method of adding these useful protectors to goloshes, we are indebted to Dr. Scoffern, who says, "It is useless to give a shoemaker the order to attach this kind of sole; the task is also beyond the capabilities of his art. The wearer must do it himself, or see it done, in accordance with the following directions:—

"Having made a large poker red-hot, pass it rapidly, several times in succession, over the surface of the india-rubber sole, in such manner that the material may be superficially melted. Next take some gutta percha chippings, warm them, and add sufficient turpentine

to form the whole into a stiff paste. The operation may be well conducted in an iron ladle, gently warmed over a fire. If the turpentine ignites, as it is very apt to do, the flame cannot be extinguished by blowing on it—on the contrary, it will burn all the stronger. By placing a flat iron plate tight down upon the ladle, however, the flame is readily extinguished, and the paste will be none the worse for the accident.

"The solution, or rather paste, of gutta percha having been prepared as directed, the next operation consists in spreading it evenly over the superficially melted surface of the india-rubber sole.

"The best means of accomplishing this is pressure, rather strong, with a clean, hot knife. The paste should not merely be brought into contact with the india-rubber surface, but should be well kneaded into it, and all the air-bubbles should, as much as possible, be destroyed.

"When an even layer of paste has been laid on, the golosh should be allowed to stand for an hour before a moderately strong fire, until the greater portion of turpentine has evaporated. This accomplished, a second layer of paste should be plastered on, and being allowed to consolidate as before, afterwards a third. The gutta percha sole is now to be attached, according to the directions which follow:—

"Take a sheet of gutta percha, something larger than the dimensions of the sole. There is no advantage in procuring the sheet already fashioned into the shape of a sole—because trimming after it has been attached accomplishes all that can be desired in this respect. Warm the sheet before the fire, passing lightly over the surface hereafter to come in contact with the india-rubber a finger wetted with turpentine. When the gutta percha has become quite soft by exposure to the fire, begin by attaching it at the toe of the golosh, gradually passing towards the heel, and taking great care that no air-bubbles get imprisoned between it and the india-rubber. Lastly, strike the sole smartly two or three times on the floor, or any hard surface, to complete the adhesion. At this stage of the operation, the gutta percha will be attached, but the sole will look the reverse of neat. It must now be trimmed, close to the edge of the india-rubber, with a pair of scissors, moistened with water, and any remaining inequality may be softened down or removed by re-application of the hot poker."

Dr. Scoffern strongly denounces the adoption of india-rubber as an article for foot-covering. He says, "For persons who habitually wear their boots and shoes, who have suddenly to leave a warm apartment and walk through snow or wet to no great distance, india-rubber goloshes may be unobjectionable. But for pedestrians, in the proper sense of the term—people who walk for many hours consecutively—india-rubber goloshes are most reprehensible wear. The same impermeability to moisture which enables them to repel wet from without, totally prevents the escape through their substance of all moisture from within. The acrid excretions of the feet are therefore retained: the feet being as completely wet as they would have been had external moisture found access to them, and far more prejudicially. Those who wear goloshes of this kind are recommended to cut them low down at the quarters, and sole them with gutta percha. Not only does the latter material help to keep the feet warm, but it obviates that disagreeable and dangerous tendency to slip which is so great a mechanical objection to india-rubber whenever it comes in contact with the wet ground."

H.—To those who study correct speaking, this is the most troublesome letter in the alphabet; but when once the difficulty of knowing how and where to use the aspirate is conquered, it adds much beauty to the English language. But let not those who have succeeded bear too oppressively on those who have not, and deem them ignorant; for it must be remembered that there is much difference of opinion as to where you should "drop" your *h*, and where "pick it up." Many people, who aspirate properly the letter at the beginning of words, are guilty of omitting it after

the *w*, as in *wh*ere, and in the middle of words, as in fore-*h*ead, ab-*h*or, ex-*h*aust, in-*h*abit, &c.; some again, which is very vulgar, aspirate where there is no *h*, as *h*ignorant for ignorant. The *h* should invariably be sounded, except in the following words, where it is mute:—herb, honest, humour, heir, honourable, hour, hostler, hospital, and their derivatives. The *h* in *h*umble is now aspirated—before, it was silent. (See *Conversation.*)

Hair, Changes in the Colour of the.—The changes which are produced by disturbances of the heart upon the cutaneous capillaries are illustrated in a remarkable manner in persons where the hair of the head has suddenly become white from a disturbance in the heart caused by violent mental excitement. A lady who was deeply grieved on receiving the intelligence of a great change in her worldly condition, and who had a very remarkable quantity of dark hair, found, on the following morning, that the whole of her hair had become of a silver white. Some striking instances of this kind are narrated by historians.

"I was struck," says Madame Campan, "with the astonishing change misfortune had wrought upon Marie Antoinette's features; her whole head of hair had turned almost white during her transit from Varennes to Paris."

The Duchess of Luxembourg was caught in trying to escape from Paris during the terrors of the French revolution, and put in prison—the next morning it was observed that her hair had become white.

A Spanish officer, distinguished for his bravery, was in the Duke of Alva's camp, and an experiment was made by one of the authorities to test his courage. At midnight, the provost-marshal, accompanied by his guard and a confessor, awoke him from his sleep, informing him that, by order of the Viceroy, he was to be immediately executed, and that he had only a quarter of an hour left to make his peace with Heaven. After he had confessed he said he was prepared for death, but declared his innocence. The provost-marshal at this moment burst into a fit of laughter, and told him that they merely wanted to try his courage. Placing his hand upon his heart, and with a ghastly paleness, he ordered the provost out of his tent, observing that he had "done him an evil office;" and the next morning, to the wonder of the whole army, the hair of his head, from having been of a deep black colour, had become perfectly white.

Hair, Preservation of the.—Perfect cleanliness is indispensable for the preservation of the health, beauty, and colour of the hair, as well as its duration. This is attained by frequently washing it in tepid soft water, using those soaps which have the smallest portion of alkali in their composition, as this substance renders the hair too dry, and, by depriving it of its moist colouring matter, impairs at once its strength and beauty.

After washing, the hair should be immediately and thoroughly dried, and when the towel has ceased to imbibe moisture, brushed constantly in the sun, or before the fire, until its lightness and elasticity are fully restored; and in dressing it, a little marrow pomatum, bear's-grease, or fragrant oil, should be used. Rowland's Maccassar Oil is the best lubricant with which we are acquainted.

The belief that washing the head induces catarrh or headache, or injures the hair, is erroneous, as the application of water to the skin is the most natural and effectual method of cleansing it, and of keeping open the pores, through which the perspiration must pass, in order to ensure its healthy condition. Besides, scales naturally form around the roots of the hair of the most cleanly person; and these can only be completely detached by the use of soap. The constant and persevering use of the brush is a great means of beautifying the hair, rendering it glossy and elastic, and encouraging a disposition to curl. The brush produces further advantages, in propelling and calling into action the contents of the numerous vessels and pores which are interspersed over the whole surface of the head, and furnish vigour and nourishment to the hair. Five minutes, at least, every morning and evening, should be

devoted to this purpose. If these rules be abided by, there will be no scurf in the hair.

Hair Work.—This art relates to the making of hair bracelets, lockets, brooches, ear-rings, finger-rings, and such like trinkets. Some lady artists apply it to imitative feathers and flowers, and, by a departure from good taste, to portraits and landscapes. At the International Exhibition, in 1862, there were portraits and landscapes in hair work exhibited, by Henrietta Lange, of Altona, very curious and ingenious, but not at all beautiful, seeing that the material and the processes are unsuited for imitating real pictures. When the work is applied to articles merely of a decorative character, very pleasing results are often produced.

To obtain a supply of hair, rather singular plans are adopted. There are regular hair harvests in France; peasant women cultivate their tresses on purpose to sell them to dealers, who sell again to large merchants in Paris, and these latter supply the peruke makers and hair workers. English dealers mostly buy the shining black hair of the south of France, rather than the lighter tints from Germany, although the latter, at one time, ruled the market. The home supply here is very limited, for English women, however poor, would, in most cases, scorn to part with their tresses for money; it is only the miscellaneous cuttings collected by the hairdresser that are available, and these are not sufficient for the finest work—hence the importation.

The making of hair ornaments is managed somewhat as follows:—Small portions of silky hair are tied at one end, washed with soda and warm water, and gently dried with a cloth; when dry, the hair is combed out straight, and drawn between two brushes, to remove short and irregular portions; the hair is then assorted into lengths, in order to equalise those which are to form one strand or plait. A number of plummets are then prepared, each consisting of a leaden ball, about an ounce in weight, tied to a yard of thin twine, or strong thread. The hair being separated into small portions, each of these is tied to the end of one of the threads, and the other ends of all the strands are united by means of thread and lac-gum.

To make use of the strands thus prepared, there is needed a kind of table made for the purpose, analogous in use to the cushion employed by lace makers. The interlacing of the hair is effected upon it. The cluster of strands is attached to a small hook, in such a way that they may be spread out smooth upon a paper diagram, or pattern, placed on the table; the markings on this pattern are made in ink, and the strands are arranged in conformity with them. A small piece of cane or wire, in the centre of the table, serves as a nucleus, around which the work is done. The work itself is a kind of plaiting, which may be varied in a considerable number of ways. The number of hairs in each strand, the number of strands, and the length of each hair, depend on the particular kind of ornament to be made. There are certain figures and letters on the table top and diagram, to assist in arranging the strands, and the manipulations bear a good deal of resemblance to those of pillow-lace making (which *see*). For some kinds of ornaments, such as lockets and brooches, many additional bits of apparatus are needed; but the main dexterity here is shown in causing the hair, by means of curling-irons, to assume those graceful curves which it is always more or less prone to take. Some of the articles thus made may be finished by the fair fingers of the lady herself, through the aid of silken and other adornments, while others require the service of the hair jeweller, who sets the twisted or curled hair in a framework of gold or other metal, to form a locket, bracelet, brooch, &c.

Halfpenny and Farthing.—Their origin was in the time of William the Conqueror. When he began to reign, the penny was cast with a deep cross, so that it might be broken in half, as a halfpenny, or in quarters, for *four-things*, or farthings, as we now call them.

Hallowe'en.—The evening of the 31st of October is called *All-hallow*

Even, or Hallowe'en; Hallowtide is a comprehensive name for both days. The papal church designed this day to be held in honour of all those saints who had not particular days appointed for them.

All over the British Islands the festive and fortune-telling practices of this evening are very nearly the same. "In North Wales," says Pennant, "there is a custom, on All Saints' Eve, of making a great fire, called *coel coeth*. Every family, about one hour in the night, makes a great bonfire in the most conspicuous place near the house, and when it is almost extinguished, every one throws a white stone into the ashes, having first marked it; then, having said their prayers, turning round the fire, they go to bed. In the morning, as soon as they are up, they come to search out the stones, and if any of them are found wanting, they have a notion that the person who threw it in will die before he sees another All-hallow Eve."

The same fire is spoken of by the Rev. Mr. Shaw, in his "History of Moray," as being kept in various parts of the Highlands:—"On All Saints' Eve they set up bonfires in every village. When the bonfire is consumed, the ashes are carefully selected in the form of a circle. There is a stone put in, near the circumference, for every person of the several families interested in the bonfire; and whatever stone is moved out of its place, or injured, before the next morning, the person represented by that stone is devoted, or *fey*, and is supposed not to live twelve months from that day."

Ringing of bells was one of the modes of celebrating Hallowmas in England, in the days of our ancestors. It was a Roman Catholic practice, being designed in some way to favour the souls of departed Christians. For this reason Queen Elizabeth prohibited it.

It was also a custom of our Catholic forefathers to have a cake baked on this eve for every member of the family, as a *soul-mass cake*, or *soul cake*. It was composed of oatmeal, and seeded.

Hallowe'en is still observed, but the more daring rites are generally given up. Meetings of young persons take place, and a plentiful store of nuts and apples being provided, a few simple amusements are practised. The experiment of burning nuts, to test the durability of love or friendship, is still a favourite pastime of the Welsh, Irish, and Scotch.

"These glowing nuts are emblems true
Of what in human life we view:
The ill-matched couple fret and fume,
And thus in strife themselves consume,
Or from each other wildly start,
And, with a noise, for ever part.
But see the happy, happy pair,
Of genuine love and truth sincere;
With mutual fondness while they burn,
Still to each other kindly turn;
And as the vital sparks decay,
Together gently sink away,
Till, life's fierce ordeal being past,
Their mingled ashes rest at last."

Burns, too, who has so beautifully and faithfully described Hallowe'en customs in Ayrshire, says—

"Jean slips in twa wi' tentie e'e,
Wha 'twas she wadna tell;
'But this is Jock, and this is me,'
She says unto hersel';
He bleezed owre her, and she owre him,
As they wad ne'er mair part,
Till, fuff! he started up the lum,
And Jean had e'en a sair heart
To see't that night."

Nuts, besides being thus used for [divi]nation, are cracked and eaten; and [henc]e, in the north of England, All-[hall]ow Eve is often called Nut-crack [nigh]t.

[O]ur obligations are chiefly due to [Ch]ambers's Information for the People" [for t]his interesting history of Hallowe'en.]

[H]am and Eggs, To Fry.—[Cut] some nice slices of ham, put them [in a] frying-pan, cover them with hot [wate]r, and set the pan over the fire. [Let] it boil up once or twice, then take [out] the slices and throw out the water; [put] a bit of lard in the pan, dip the [slice]s in wheat flour or finely rolled [crac]kers, and when the fat is hot, put them [in] the pan, and sprinkle a little pepper [over]; when both sides are a fine brown, take them on a steak dish, put a little boiling water into the pan, and put it in the dish with the meat. Now put a bit of lard the size of a large egg into the pan, add a pinch of salt to it, and let it become hot; break six or eight

eggs carefully into a bowl, then slip them into the hot lard; set the pan over a gentle fire. When the whites begin to set, pass a knife blade so as to divide an equal quantity of white to each yolk, cut it entirely through to the pan, that they may cook the more quickly. When done, take each one up with a skimmer spoon, and lay them in a chain around the edge of the meat on the dish. Fried eggs should not be turned in the pan.

Hams, To Cure.—The following recipe is the German method, and no hams can possibly excel them in flavour:—To each ham (if large) one pound of bay salt, two ounces of saltpetre, and one ounce of black pepper; all well beat and mixed together. Rub the ham well with it. Let them be in the pickle for four days, turning and basting them with the liquor every day. Then put upon them one pound and a half of treacle. Let them lay one month in this pickle, turning and basting them daily. Then take them out of the pickle and lay them twenty-four hours in cold water; then hang them up to dry. Hams cured in this way need no soaking. Only wash them in warm water. Let them boil gently.

Handkerchief, Pocket.—In "Notes and Queries" we find that the component parts of this familiar term are four—namely, *pocket; hand; ker*, car or cover, from *couvre; chief*, from *chef*, head; that is, pocket-hand-cover-head, or pocket-hand-head-cover. Hence the transitions that have taken place in the use of that article of dress; first worn on the *head*, then carried in the *hand*, and lastly in the *pocket*. The word *mouchoir* is not the translation of it, unless *de poche* be added; for the French have *mouchoir de tête*, *mouchoir de cou*, as well as *mouchoir de poche*. In fact, *mouchoir* has, like the other, deviated from its original meaning. First confined to the use of the *nose*, as the verb *moucher* implies, it has passed from that organ to the *head*, from the head to the *neck*, and from the neck to the *pocket*.

Handkerchief, Signs Conveyed by the.—Those living in ignorance of these signs, and who wish to use them, may be thoroughly booked up and enabled to read them thus:—Drawing across the lips—desirous of getting acquainted; drawing across the eyes—I am sorry; dropping—we will be friends; twirling in both hands—indifference; drawing across the cheek—I love you; drawing through the hands—I hate you; letting it rest on the right cheek—yes; letting it rest on the left cheek—no; twirling in the left hand—I wish to get rid of you; twirling in the right hand—I love another; folding—I wish to speak with you; over the shoulder—follow me; opposite corners in both hands—wait for me; drawing across the forehead—you have changed; placing on the right ear—I have a message for you; letting it remain on the eyes—you are cruel; winding round the fore-finger—I am engaged; winding round the third finger—I am married.

Handkerchief Scent.—See *Ambergris*.

Hands, Oratorical Use of the.—The hands are open or relaxed in graceful calmness; they are locked or clasped in *emotion;* they are wrung in *anguish;* they are rigid or clenched in *passion;* they are raised and extended in *supplication;* they descend slowly in *blessing;* with quick vehemence in *malediction* and *threatening;* they are moved towards the body in *invitation;* they are pushed from the body in *rejection* or *dismissal;* the palms are turned upward in *candour* and *sincerity;* downward in *concealment* and *cunning;* they are turned outwards from the body in *defence*, in *apprehension*, or in *aversion;* they are turned inwards towards the body in *boldness* and *confidence;* they start in *astonishment;* they wave or clap in *joy* and *approbation*. The hand on the forehead indicates *pain, confusion*, or *mental distress;* on the crown of the head, *giddiness* or *delirium;* on the side of the head, *stupor;* on the eyes, *shame* and *grief*. Both Hands, similarly applied, intensely heighten the expression. The hand supporting the cheek expresses *languor* or *ennui;* supporting the chin, *meditation;* the hand laid on the breast appeals to *conscience*, or indicates *desire;* the hands crossed on the breast express

meekness; the hand pressed on the upper part of the chest, or beating it, expresses *remorse*, or *acute bodily distress, difficulty of breathing, palpitation of the heart, &c.;* on the lower part, it indicates *boldness*, or *pride;* the back of one hand laid in the palm of the other, expresses *determination* and *obduracy;* the hands crossed palm to palm, express *resignation*.

Hands, Chapped.—See *Glycerine*.

Hay and Straw, Weights of.—

Truss of Straw, 36 lb.
Truss of Old Hay, 56 lb.
Truss of New Hay, 60 lb.
Load, 36 Trusses = Straw, 11 cwt. 2 qrs. 8 lb.; Old Hay, 18 cwt.; New Hay, 19 cwt. 1 qr. 4 lb.

Headache, Two Reliable Remedies for.—1. Proper diet and exercise, cheerfulness of mind, and agreeable social intercourse, will do more towards regulating the stomach and bowels in those pre-disposed to this dreadful pain, than any plan of medical treatment that can be suggested. However, vinegar bandages, applied to the temples and forehead, give great relief. Mr. Thompson, a traveller in Mexico, describes an efficacious remedy used there. The head must be bent down on the side from which the pain proceeds, whilst a teaspoonful of rum, or any other spirit, is introduced into the ear. The patient should then remain quiet till the pain subsides, which is usually in three or four minutes. This has been tried and great benefit derived from it on more than one occasion.

2. Moisten a linen rag with sulphuric ether; apply it to the forehead, and prevent evaporation by covering it with a piece of oiled silk. It will generally relieve the most obstinate headache in a very short time. (See *Exercise*.)

Health, Influence of Employments on.—Undoubtedly the progress of disease is accelerated or diminished by the nature of certain occupations. A paper on the subject, by Professor Guy, was read some time since at a meeting of the Statistical Society, compiled from the registers of the out-patients of King's College Hospital, and comprising upwards of 3,000 individuals engaged in various occupations. From this the following conclusions were deduced:—That in females the ratio of cases of pulmonary consumption to those of all other diseases is highest in those following in-door employments; and least in those occupied out of doors. The highest ratio occurs in the case of females whose habits of life are irregular. In men the ratio of cases of pulmonary consumption to other diseases is somewhat higher in those following in-door occupations than in those working in the open air. In fact, the ratio of cases in those employed in-doors varies inversely to the amount of exertion, being higher when there is the least exertion, and lowest in employments requiring strong exercise. Neither a constrained posture nor exposure to a high or a moist temperature appear to have any marked effect. The ratio of cases of pulmonary consumption to those of all other diseases is highest where persons are exposed to inhalation of dust; there being in persons so employed far fewer cases of consumption than of all other diseases. In those addicted to habits of intemperance, the ratio is two to five. The first attack is also earlier in those following in-door occupations—and the practical rules to be deduced from these observations are, that those persons who have an hereditary tendency to consumption should make choice of occupations which are carried on in the open air, and that, if they are obliged to choose some in-door employment, it should be one requiring strong exercise; and that they, more than others, should avoid exposure to dust, and habits of intemperance. (See *Consumption* and *the Italian Climate*.)

Health Resorts.—In these days of cheap travelling by boat and rail, combined with the well-managed excursion trains presided over by Messrs. Cook and Son, the invalid and tourist have much to be grateful for. The tourist who travels to preserve his health, and to delight his fancy—who is strong against breezes from the east or the west—it is not of much consequence where he wanders, for scenes of beauty and exhilaration invite him everywhere;

but for invalids—those who have to be cautious of the parts the wind doth blow from—the place they shall go to in quest of restoration for their debilitated constitutions is a question of great importance.

Change of scene and change of air are great aids to the health-seeker, and when the summer comes round the universal question with him or her is, "Where shall I go for the benefit of my health?"

With the aid of Dr. Spencer Thomson's book on "Health Resorts," we will endeavour to help the invalid in his choice of winter and summer quarters, premising, however, that our space will only allow us to glance at the most popular.

RAMSGATE, MARGATE, and BROADSTAIRS may be taken first as the most popular places of resort. Margate is the model of a well-regulated sea-side watering-place, and admirably calculated for its London visitors. If you are a tired Londoner, not too dignified or *distingué*, and want a week or more in a cheery, bright, life-loving, and not too constrained sea-side resort, you cannot do better than go to Ramsgate. The sands of this place are allowed to be pre-eminent in their way, and the promenade upon the magnificent double piers which enclose the well-known Ramsgate Harbour, is, perhaps, unequalled in the kingdom. Ramsgate, too, has a somewhat warmer climate, which has to be considered when the invalid is making choice of a sea-side residence between these popular places; but it is wanting in that quiet which is to be found at Broadstairs and Margate.

If quiet and more exclusiveness is preferred, Broadstairs should be chosen. Midway between Ramsgate and Margate this retired little watering-place lies snugly beneath the bold jutting promontory of the North Foreland, which rises about a mile and a half distant. Broadstairs, too, possesses good firm sands. But of the three places, this is the most expensive.

Margate is decidedly the best place for bathing. The bather will here find the means of tepid or warm sea-bathing in perfection. Here, too, are sea-breezes of the freshest and most invigorating kind.

DOVER AND FOLKESTONE.—These towns have risen greatly into favour of late years, not only as a summer seaside resort, but also as a winter residence. In the latter particular, however, they cannot compete with such places as Hastings, Torquay, and the Isle of Wight. Dover has many sheltered portions under its tall and imposing cliffs; but these are comparatively limited in extent, and the general character of the town is exposure to high winds. The climate is undoubtedly a favourable winter one when compared with that of Britain generally, but it is more suited to persons who, from some defect of general health, or minor local ailment, require a modified, rather than a completely guarded atmosphere. As regards local attractions connected with Dover, independent of the sea itself, the views from the cliffs, both seaward and landward, are unquestionably the first.

The remarks upon the drier climate of Dover apply pretty nearly to Folkestone; and, as the latter has its cliffs, it has also its little bits of shelter. The views from these cliffs are fine, extending across the Straits to France, and, westward, over the Romney Marshes.

TUNBRIDGE WELLS.—This place still holds its ground as one of the most favoured of British health resorts. It has not, perhaps, the characteristic health effects and ever varying interests of a sea-side residence, but it has, nevertheless, advantages which are peculiar to itself in an eminent degree, not the least of these being the dry character of its air (which is a great advantage in many cases of impaired health), the gentle, tonic restorative powers of its carbonated chalybeate waters, and the cheerful character of its undulating country. Well may this place be called "The garden of Kent." The dryness of Tunbridge Wells is due, first, to the comparatively small amount of rain which falls in the district; and, secondly, to the absorbent nature of the soil. The average summer temperature of the district is comparatively cool, being 3° lower than London.

HASTINGS AND ST. LEONARD'S.—How often do we hear it said, in the latter

months of the year, that such an one "has gone to Hastings for the winter;" and when we hear it, how certainly do we conclude that it is for some manifestations of delicacy of chest; or perhaps it may be on account of consumptive symptoms actually developed that this winter residence has been selected. But why Hastings in preference to any other locality on the south coast of England? One glance at the tall cliffs that guard the little valley in which the town lies from the dreaded east and north winds must tell why Hastings is so often chosen as the refuge for those to whom these winds, in winter and spring, bring disease and death. From the end of October until the beginning of April, the climate of Hastings is considered to offer its greatest advantages, as compared with other parts of the kingdom; but the months of December and January are those in which it is thought to excel most, if not all, other places, such as Brighton, on the south coast, as a residence for invalids, those particularly with tendency to consumption; but it is unfavourable to nervous complaints. With all its advantages, however, Hastings has unfortunately the drawback of being deficient of walks for the invalid.

St. Leonard's is not so warm as a winter residence as Hastings. It is likewise less sheltered from the east, and is fully exposed to the south and south-west, so that, for very delicate invalids, susceptible of atmospheric variations, it would not be so eligible; to others, however, it would be better suited, especially where a more bracing effect is required. The sea-bathing both at St. Leonard's and Hastings is excellent.

Brighton.—Although, as an invalid residence, the advantages of Brighton are chiefly prized during the autumnal and early winter months, there can be no question that the summer beauties of the place itself, and of its surrounding country, where walks and drives are in their perfection, render it a most attractive sea-side home. Sir James Clark says:—Compared with other parts of the south coast, the climate of Brighton appears to the greatest advantage in the autumn and early part of winter, when it is somewhat milder and more steady than that of Hastings. Accordingly, in all cases in which a dry and mild air proves beneficial, Brighton, during this period of the year, deserves a preference over every other part of this coast. In the spring, on the other hand, owing to its exposure to the north-easterly winds, the climate is cold, harsh, and irritating to delicate constitutions. At this season, therefore, sensitive invalids generally, and more especially persons with delicate chests, should avoid Brighton."

The Isle of Wight.—The position of the Isle of Wight on the southern coast, and its being sea-girt, are circumstances which in themselves tend to give it a climate milder than that of almost any other place in the kingdom; but, in addition to these advantages, some of its most favoured sites are still farther ameliorated by the circumstances of soil and protecting cliff. Of these, perhaps, none is better or more favourably known than that portion of the island which lies on the south-east coast, and comprehends within its limits Bonchurch, Ventnor, St. Lawrence, &c., all well frequented resorts for the invalid. This district is called the "Undercliff," from its being situated at the base of the lofty cliffs which have doubtless yielded the material for its formation, and now yield that protection which renders the little strip of sea-land soil so valuable as the winter resort of hundreds, who, suffering from delicacy of chest, or tendency to consumption, cannot reside in more northern or less sheltered districts.

Sir James Clark states from the end of October to the middle of May as the proper season for the residence of those who seek this mild climate on the score of health, and even up to the middle of August it is allowable; but from that time to the middle of October it is far from a desirable resort. "The air is then relaxing, and has a depressing effect upon the animal economy."

Bournemouth.—Dr. Aitkin, who resides at Bournemouth, tells us—"There are two descriptions of persons to whom this climate offers great advantages, though neither may be said to labour

under actual disease. In the first place, to persons who have long been resident in hot climates, and whose constitutions have, consequently, undergone changes that render them peculiarly susceptible of morbid impressions, resulting from the cold and dampness which prevail over by far the greater part of Great Britain. In the second place, to the young, who either from hereditary or accidental causes are of a weak habit of body, and whose tender and delicate constitutions, though unaffected with actual disease, yet are a constant source of apprehension and anxiety to their parents." Dr. Mainwing also says—"As a resort for delicate and rickety children it is unrivalled. The sands afford an ample scope for amusement and exercise. I have often been delighted and surprised by the rapid improvement which has taken place in pale and sickly children from India, and in children suffering from rickets in an aggravated form. These advantages are not confined to children; the invalid suffering from consumption will here find comfort and relief by a winter residence."

TORQUAY.—The visitor in health, and the invalid who is not too great an invalid to undergo a little fatigue, will find abundant scope for pleasant walks and excursions in the vicinity of this favoured spot, this garden of Devon. One might almost long for a little, only a little, threatening to health, which would consign us to so pleasant, interesting, and beautiful a resort as Torquay. The claims of this place as a health resort, rest upont he warmth, and especially the equable warmth, of its climate—that is, while it is warmer than perhaps any other place in Britain during winter, it is comparatively cool in summer—and hence its high claims to usefulness in the case of consumptive invalids. (See *Air and Consumption.*)

Healths, CUSTOM OF DRINKING.—This custom is derived from the Romans, and was used by them as a kind of invocation to their gods and emperors, whose names were frequently introduced among their cups with many good wishes. At the conclusion of their meetings they drank the cup of their good genius, which was the same with that of *Jupiter Sospiter.* This custom was prevalent among the Greeks. Hence is derived the *parting cup* of the English, the *coup d'etrier* of the French, and the *doch un dorish* of the Scotch.

Herrings, TO POT.—These fish are richer, and keep longer, if baked than boiled. Whichever method is chosen, sprinkle them with two parts salt to one sugar, and be careful not to exceed these proportions. Rather less time will suffice than if they were for eating hot. When cold, pick off the fish free from skin and bone, and chop and pound the meat in a mortar. To one pound of fish allow two ounces of fresh butter, which, with the hand, work to a cream; then beat it up with the fish, at the same time seasoning to taste with salt, grated nutmeg, or pounded mace and cayenne. Beat the whole to a paste and put it into small pots with lids; cover the top of each with a thin coat of melted butter or mutton suet; shut down, and gum a strip of paper round each jar to cover the edge of the lid. Lobsters, shrimps, and prawns, are prepared in the same manner.

Hieroglyphics.—Hieroglyphic writing, which was in use in the primitive ages of society, was composed of figures of sensible objects, images of material facts, or emblems of moral truths. Thus, an army was represented by a buckler and a long bow, the Supreme Being by an eye, a conqueror by a sword, &c. We ourselves write in hieroglyphics when we represent hope under the figure of a woman supported by an anchor, and when we give to justice, personified in the form of a virgin, a sword and a balance. But this representation by images is what is most remote from our decomposition of sounds by written alphabetical characters. This designing by images is to the writing of sounds precisely what gesture is to language, and one may say that it is the writing of gestures, inasmuch as gestures only imitate sensible objects.

"Writing," says Duclos, speaking of that of the Egyptians and of the Chinese, "was in that state that it had no relation with our present writing." The art of imitating sensible objects presents itself naturally to man, because the models

are everywhere before his eyes, and because he has a natural inclination to copy them. He who sees the shadow of a body projected on a plane surface has only to follow its outlines in order to have the first notions, and even the first rules, of the art of designing or of drawing. In reality, in the early ages of our race, the art of design consisted only in outlines and lineaments without shade, and it is not to be wondered at that the human race, during its infancy, should have practised what is still the amusement of children and of savages. The first peoples, then, wrote their histories with altars, tombs, and stony pillars, which they elevated in the deserts. But when, more advanced in intelligence, and incited by their interests and events, they wished to transmit to posterity memorials more distinct and circumstantial, they were undoubtedly stopped by the impossibility of copying to nature the facts and the emblems of truths, the memorials of which they wished to perpetuate, and the conditions of which they wished to have preserved. They contented themselves with designing the principal features; accordingly, they represented a whole army by a long bow and a buckler, necessary things for war; agriculture by a farming implement; the Divine Being by an eye; an appropriate symbol of foreknowledge and providence, &c. Hence it will be seen that this was an abbreviated mode of designing.

"Hob and Nob." — This phrase, according to Grosse, originated in the days of good Queen Bess. When great chimneys were in fashion, there was at each corner of the hearth or grate a small, elevated projection called hob, and behind it a seat. In winter-time the beer was placed on the hob to warm, and the cold beer was set on a small table, said to have been called the nob, so that the question, "Will you have hob or nob?" seems only to have meant, "Will you have warm or cold beer?" that is, beer from the hob, or beer from the nob.

But Nares, in his "Glossary," with much greater reason, shows that "hob or nob," now only used convivially, to ask a person whether he will have a glass of wine or not, is most evidently a corruption of the old hab-nab, from the Saxon, *habban*, "to have," and *nabban*, "not to have;" "in proof of which," as Nares remarks, "Shakespeare, in his *Twelfth Night*, has used it to mark an alternative of another kind:—'And his incensement at this moment is so implacable, that satisfaction can be none but by pangs of death and sepulchre; hob nob is his word; give't or take't.'"

"Hobson's Choice."—The origin of this term arose from a Cambridge man, called Hobson, who was an eccentric carrier and livery-stable keeper. He was very particular that his horses should not be overworked, and insisted that each animal should have its period of rest; and to ensure this, he would only let them out in their regular turns. Hence, those who required a horse were compelled to take that chosen by Hobson, or none. Thus was derived the term of "Hobson's choice."

Hollyhocks, Culture of.—"The hollyhock is not so generally grown as its decorative qualities entitle it to be," says a correspondent in *The Gardener*. "When grown amongst shrubs, in situations moderately sheltered, few plants produce a finer floral display during the autumn months. The great drawback to its cultivation is the liability of the plants to get broken with the winds; but if secured, when 18 inches high, to suitable stakes, this objection is at once got over. At planting-time give each plant a few spadefuls of rotten manure, and, if possible, a little fresh soil; press the earth firmly round the plants; and if the ground is dry, give a good watering. In due time stake each plant, and as the stems advance in growth secure them thereto with strong ties of matting. If the above simple hints are attended to, the result, in most instances, will be satisfactory.

"When hollyhocks are grown for exhibition, they must have a plot of ground devoted to themselves; let the situation be as sheltered as possible, but never near to anything that would in the least obstruct the noonday sun or a free circulation of air. To produce spikes such as are seen at some of our horticultural

shows, requires a rich soil. To secure this, let the ground be trenched in autumn, adding, as the work proceeds, a liberal supply of good manure. When the trenching is complete, give the surface a dressing, two or three inches thick, of the best manure procurable; the winter rains will wash the best parts of it into the soil, and when planting-time comes a slight forking is all that is required to make the bed in readiness to receive the plants. The plants should not be put out until all danger from severe frost is passed, say the end of March or beginning of April. Let the plants stand three feet apart in the lines, and five feet from line to line. When finished planting, if the ground is moderately dry (which it should be, as it is a bad plan to plant when the soil is over-wet), make the surface rather firm by giving the whole a gentle treading with the feet. Place at once over each plant some spruce or other evergreen branches, as a protection against frosts and cutting winds; as, if they get frozen to any extent, the spikes are never so fine. As soon as all danger from frost is past, remove the protection, examine each plant, and see that all are firm in the soil.

"Let only one stem rise from a plant, and nip out all laterals as they appear. Never allow the plants to suffer for want of water; and as soon as flower-buds are formed, mulch the beds with rotten manure. I prefer this to giving manure water, as the latter, unless applied with judgment, has a tendency to make the plants grow by fits and starts, thereby causing irregularity in the build of the spikes, a fault which neither length of spike nor size of blooms will compensate for. In most instances, two flower-buds will start from the axil of each leaf; nip out the smaller of the two; and in any case of crowding, thin to the requisite number. During the three weeks preceding the show, the spikes must be protected from rain and strong sun. This, in the case of the hollyhock, is not so readily accomplished, but it is necessary to the production of clean spikes; and the cultivator must not neglect it, as by doing so he will destroy his chance of attaining the end in view."

Home Influence.—A child naturally looks to its parents for an example, and, with the perversity of human nature, takes to the evil with greater readiness than the good.

Parents would save themselves much trouble, if, instead of constantly preaching to their little ones, they would take more heed to their own every-day practice.

Important it is that men and women should, in the presence of children, have their conduct and sayings ever well ordered—for these often speak volumes to the youthful, when the elder folks scarcely dream that such is the case.

One act of self-denial to add to the comfort or happiness of others in the home circle is of more value than a hundred precepts—the one is a tangible substance, the other, but too often, a shadow by which we cheat ourselves and others.

Example is the mould of human nature, and by that and surrounding circumstances is the character formed. Man is scarcely capable of receiving firmer impressions than those left by its influence; and glory and shame are alike indebted to its power for a portion of their manifold followers.

It is impossible to estimate the weight of an undeviating course of rectitude on the minds of those by whom we are surrounded, in checking bursts of passion, quelling sinful aspirations, and presenting at the same time a copy they are irresistibly led to imitate.

Persons who swerve from the path of virtue and rectitude are apt to say that no one has a right to interfere with them, because they do no one any harm except themselves; but even this miserable shift is based upon a false theory, for every one who thus goes astray exerts an influence for evil upon others. How great, then, is our responsibility! and how careful should we be to act as we would have others act!

Every parent should remember that he exerts *some* influence over his household; if this be not for their *good*, it must be to their *hurt*, and woe will fall upon his head in dreadful measure who influences not his family for good! If all who have their children's welfare at heart

would only bear this in mind, how happy would be the results!

When we observe our very infants, as time rolls along, copying actions as well as words, how careful it ought to make us to keep watch and guard over all we say and do. As much of *their* future character depends on it—if we would have our children grow up useful, careful members of society, then we must carefully set them such an example as we should like to see followed.

Younger branches resemble mimic monkeys, seldom reflecting, but looking everlastingly up to the varied motions of their seniors—whose ways would require to be well arranged indeed, that they may not fix on those sensitive spirits an eternal stain, such as may haply hinder not only the mundane career's success, but be an everduring bar to the propagation of such seeds in the soul, as shall, flourishing, lead eventually to the unclouded galaxy of the glorious redeemed.

Matthew Henry used to say his parents' example led him to love the right. The mother of the generous Lamartine was a good, generous, pious woman. All these are fruits of the influence example possesses; and, as the old lines say:—

> "Example teaches oft where precept fails,
> And sermons are less read than tales."

"A word in season, how good it is!" but better even than this is a good example—it is a sign-post, with finger extended continually, with silent influence inviting you to follow the good road. May we all think more seriously of the responsibility of our influence in the home circle, and never by our example or precept cause a weak brother or sister to err!

A parent's charge is so responsible that it needs great watchfulness, and, unless precept and example work together, little good is done; for the former leads, the latter draws. If you point your children to good with one hand, be careful by example you do not drag them to ruin by the other; remembering also that a child must have instruction in the rules of drawing, as well as copy placed before him. As far as lies in your power imitate Goldsmith's country pastor:—

> "And as a bird each fond endearment tries,
> To tempt its new-fledged offspring to the skies,
> He tried each art, reproved each dull delay,
> Allured to brighter worlds and led the way."

Great is the influence of brothers and sisters, and very responsible are they for its effects, either for good or evil, upon the minds of each other. It is the ready sympathy and kind, unselfish deed, the soft answer and forbearing love, which constitute the happiness of home; and "how good and pleasant a thing it is for brethren to dwell together in unity!"

The foundation of a happy home rests, undoubtedly, with the heads of a family. It is in the power of the parents to surround the domestic hearth with an atmosphere pervaded by moral purity, gentleness, truth, and love; and the children will naturally imbibe and assimilate the same, and the result, in the majority of cases, will be characters in harmony therewith.

Home, to Make it Comfortable.—The small, sweet courtesies of love will always render a home comfortable and happy. We have lately met with the following excellent letter from a father to his daughter, which should be read by every one:—

"I want to tell you a secret. The way to make yourself pleasing to others is to show that you care for them. The whole world is like the Miller of Mansfield, 'who cared for nobody—no, not he—because nobody cared for him.' And the whole world will serve you so, if you give them the same cause. Let every one, therefore, see that you do care for them, by showing them what Sterne so happily calls 'the small, sweet courtesies of life'—those courtesies in which there is no parade, whose voice is too still to tease, and who manifest themselves by tender and affectionate looks, and little, kind acts of attention—giving others the preference in every little enjoyment at the table, in the field, walking, sitting, or standing. This is the spirit that gives to your time of life, and to your sex, their sweetest charms. It constitutes the sum-total of all the witchcraft of woman. Let the world see that your first care is

for yourself, and you will spread the solitude of the upas tree around you, in the same way, by the emanation of a poison which kills all the juices of affection in its neighbourhood. Such a girl may be admired for her understanding and accomplishments, but she will never be beloved. The seeds of love can never grow but under the warm and genial influence of kind feelings and affectionate manners. Vivacity goes a great way in young persons. It calls attention to her who displays it; and if it then be found associated with a generous sensibility, its execution is irresistible. On the contrary, if it be found in alliance with a cold, haughty, selfish heart, it produces no further effect, except an adverse one. Attend to this, my daughter; it flows from a heart that feels for you all the anxiety a parent can feel, and not without the hope which constitutes the parent's highest happiness."

Homœopathy, Principles of.—From a worthy little volume on this subject, entitled "The British Workman's Family Guide," we quote the following:—Homœopathy has received its name from two Greek words, signifying *similar suffering*, because it cures by giving a medicine which would, if given to *healthy persons in large doses*, produce symptoms or sufferings like those which it cures. And it is by trying the medicine in healthy persons that it finds out what sort of ailments it will cure. This is one advantage which Homœopathy has over the old plan, that it never tries experiments on the sick; while the old plan is to experiment on the sick with large doses of violent medicines.

Homœopathy also differs from the old plan in giving *much smaller doses*, because people who are very ill and weak cannot stand what strong healthy persons can. It also differs from Allopathy in giving only one drug at a time. When many drugs are mixed together they alter each others' properties in such a way that nobody can tell what effect they will produce taken all together.

The same book sets forth the following advantages of Homœopathy over the old system of medicine:—

It cures more quietly.—In the most severe diseases, for instance, such as inflammation of the lungs, it has been proved that the patient is cured in about one half the time by homœopathy, and besides this, when he is cured of the disease he is well, and ready for work directly.

It is pleasanter than the old system.—The medicine has no bad taste. There are no painful appliances, such as vomits, bleeding, blistering, &c., and there is no difficulty in giving the medicine to children, even the youngest.

Because Homœopathy is cheaper.—It is cheaper because it shortens the disease, and the remedies are cheaper. Homœopathic medicines do not cost one farthing per dose on an average.

Because it does not weaken the patient.—No bleeding, blistering, vomiting, or purging have been produced by the treatment. When the patient is well of the disease, he regains his strength immediately, because it has not been drenched and drained out of him.

Because it will give relief even where a cure is impossible.—In cases of consumption, for instance, which cannot be cured, the relief it gives to the patient is very great, and the same may be said of other incurable diseases.

Because it never experiments with drugs on the sick.—The medicines, before giving them to the sick, are always tried on the doctors and their friends; and in this way they find out what they will cure before they give them to the sick.

About the Diet.—Homœopathy interferes very little with the diet. In severe diseases the patient generally *loses* his appetite. When this is the case, food is improper, and should not be pressed on the patient. Give him as much cold water, or toast-water, or barley-water, or whey, as he likes to take, but do not press him to eat. Gruel or arrowroot may be given whenever he can take it with a relish, but after illness he must be cautious in returning to his usual food. The return to ordinary diet must be gradual; from gruel and arrowroot he may be promoted to beef-tea or good broth, or cocoa; then afterwards he may try a very little of the lean of a mutton chop, done nicely on the red coals;

afterwards a little beef-steak and bread, or eggs lightly boiled, but at first he must only take very small quantities of solid food.

Whilst using medicines there are a few things which must not be taken at all, as they are apt to destroy or hinder the medicines from producing their proper and full curative effects. These are, *coffee, onions, shell-fish, public-house beer,* or *porter* or *wine,* or *spirits,* also *tobacco,* and everything which is apt to disagree with the stomach.

Those of our suffering readers who have found no relief from the old style, we advise to give the new doctrine a trial. Be it observed that Homœopathy has steadily increased in public estimation, and has amongst its adherents a large number of the aristocracy and many eminent physicians, who have become converts to this new method of treating disease.

"Honeymoon."—The word "honeymoon" is traceable to a Teutonic origin. Among the Teutons was a favourite drink called metheglin. It was made of mead of honey, and was much like the mead of other European countries. These honied drinks were used more especially at marriage festivals, and which were kept up among the nobility one lunar month; the festive board being well supplied with metheglin. "Honah moon," signified the moon, or moonath, of the marriage festival. Alaric the Goth, celebrated in Southey's poem, died on his wedding night from a too free indulgence in the honied drink.

Hooks for Angling.—See *Angling.*

Horse-Power as Applied to Machinery.—It is well known among engineers that a horse is capable of raising a weight of about 150 pounds 220 feet high in a minute, and to continue exertions enabling him to do that for eight hours a day. Multiply the number of pounds by the height to which they are raised in a minute, 150 x 220, gives 33,000 pounds, and the power of a horse is generally expressed by a sum, varying from 30,000 to 36,000 pounds, raised one foot high in a minute. One horse can draw horizontally as much as seven men. In machinery in action from one-fourth to one-third is allowed for friction in calculating its equivalent of horse-power.

Hosiery.—All hosiery is to be judged of by the fineness of the thread and the closeness of the texture, which, in the case of stockings especially, may be partly appreciated by weighing, as it were, the articles in the hand. In ribbed stockings a deception is sometimes practised, against which it is necessary to guard. The spaces between the ribs, which ought to be formed by an insertion of the stitch, contain no stitch at all, but an open range of threads pervious to the weather, and utterly destitute of durability. As the ribs of stockings exposed to sale are necessarily almost in contact, the fault cannot be detected without introducing the hand and opening the tissue, when it will be apparent, and, indeed, will exactly resemble the flaw caused by a dropped stitch in a stocking in wear.

Hour-Glass, To Make.—An hour-glass may be made thus:—Procure a cork that will fit the necks of two oil flasks, and make a neat hole through it with a round file. In the middle of this hole fasten a bead, or piece of tobacco pipe a quarter of an inch long. Dry some common house sand in a ladle over the fire, and shake it through a fine sieve or muslin bag; fill one of the flasks with it, fit in the cork, and invert it over the jug or the neck of a wine bottle; let it run for an hour; collect the sand that has passed through and pour the rest away; return the sand to the flask, and fit in the other. Place the whole in a wooden frame for support. Egg-glasses are to be made with two small phials, furnished with sand to run for three minutes. The flasks should be well dried by the fire, and the cork sealed in. If oily, they may be cleansed with a little hot water, sand, and salt of tartar.

Household Education.—See *Education, Household.*

Housekeepers, Useful Hints to.—Paint the steps of your staircase a stone colour; it will save scouring and soap.

Never suffer your rooms to be littered,

but keep your tables and chairs in their proper places.

Rub your own tables, if you wish to be warm all day.

Dine late: it makes the day longer, and saves a supper.

Be regular in your accounts: it will secure your husband's esteem.

If you have daughters, teach them all needlework, and to keep the family accounts.

Love your own house better than your neighbour's.

Keep no servants that have hangers-on. Keep no more servants than you can employ.

Dress modestly, but not fine, unless the world knows you can afford it.

Insure your life, and you will sleep the better for it.

Never be tempted to buy what you do not want.

Do not put too much money in your children's pockets on going to school: it is sowing the seeds of prodigality.

Look out for the deserving poor of your own neighbourhood, and give them what you can spare.

If you have a family, and are not very affluent, remember that a pin a day is a groat a year.

A gossip has no home.

If you are rich, be liberal in your expenses.

Never write a letter when in a passion.

Seldom venture on giving advice without being asked.

In the morning think on what you are to do in the day; and, at night, think on what you have done.

If you are ever so wise, there are many things on which you are ignorant.

Live to-day as if you were to die to-morrow.

Money got by industry is Heaven's gift.

Do not leave that to be done to-morrow that conveniently may be done to-day.

Good manners are best learned by keeping good company.

Set your watch, every morning, by a good clock, and you will find a bad watch to go nearly as well as a good one.

Good breeding requires that you be punctual to your engagements.

Houses, Cautions in Buying.

1. Ascertain that the house is not built on made soil, where the gravel has been dug out and sold.

2. That it has deep concrete foundations.

3. That all the materials are new, and the bricks not imperfectly burned.

4. That no iron chimney-bars, supporting the arch, are absent.

5. That the drainage is distinct and separate, properly connected with the main sewer.

6. The strength of joists, quarterings, lintels, rafters, thickness of doors, floor-boards, skirtings, shelvings, shutters—in short, quality and quantity of timber used. It is truly frightful to see how lightly houses are now timbered.

7. Whether the grates, locks, ironmongery, blinds, and other fittings, are of the very cheapest description, and unfit for wear.

8. That it has a trap-door fire-escape to the roof.

9. Avoid zinc gutters, cisterns, flats, &c., as zinc is a very temporary affair. Insist upon lead or stone cisterns.

10. If the parish have not taken the road, have money security for its cost from the seller: it may save the buyer from £10 to £30.

11. Find out if it is an estate where any scamping is allowed to create heavy ground rents.

12. Investigate the title thoroughly. Beware of needy or bankrupt vendors and improved ground rents.

Lastly. Before purchasing or deposit, insist upon a legal warranty, with full specifications attached, subject to penalties if false.

Husbands, Advice to.—Do not jest with your wife upon a subject in which there is danger of wounding her feelings. Remember that she treasures every word you utter, though you never think of it again.

Do not speak of some virtue in another man's wife, to remind your own of a fault.

Do not reproach your wife with personal defects, for if she have sensibility, you inflict a wound difficult to heal.

Do not treat your wife with inattention in company.

Do not upbraid her in the presence of a third person, nor entertain her with praising the beauty and accomplishments of other women.

If you would have a pleasant home and cheerful wife, pass your evenings under your roof.

Do not be stern and silent in your own house, and remarkable for sociability elsewhere.

Remember that your wife has as much need of recreation as yourself, and devote a portion, at least, of your leisure hours to such society and amusements as she may join. By so doing, you will secure her smiles and increase her affection.

Do not, by being too exact in pecuniary matters, make your wife feel her dependence upon your bounty. It tends to lessen her dignity of character, and does not increase her esteem for you.

If she is a sensible woman, she should be acquainted with your business and know your income, that she may regulate her household expenses accordingly.

Do not withhold this knowledge in order to cover your own extravagance. Women have a keen perception, therefore you may be sure she will discover your selfishness; and, though no word is spoken, from that moment her respect is lessened and her confidence diminished, pride wounded, and a thousand, perhaps unjust, suspicions created. From that moment is your domestic comfort on the wane. There can be no oneness where there is no full confidence.

"Hustings," Origin of the Term.—The term "husting," as applied to the scaffold erected at elections, from which candidates address the electors, is derived from the Court of Husting, of Saxon origin, and the most ancient in the kingdom. Its name is a compound of *hers* and *ding*—the former implying a house, and the latter a thing, cause, suit, or plea; whereby it is manifest that *hersding* implies a house or hall, wherein causes are heard and determined.

Ice Crops.—Like other crops, ice depends upon the season. A rapid thaw will throw all the operations of the ice-men out of gear; a fall of snow, and a subsequent thaw, will entail upon him much hard and profitless labour. What he requires is a still day, with the thermometer 20° below zero. Then the hands make ready the ice-plough, and set to work. The first step is to run the sharp ice-plough along the surface in a line, marking out a square of three or four acres. This line is cut a few inches deep, and is used as a guide for another plough, drawn by horses, called the marker. This machine cuts two parallel lines about twenty-one inches apart; other parallel lines are drawn at the same distance in a similar manner. When the whole space has been thus ruled one way, the process is repeated at right angles until the surface of the ice is divided into squares of twenty-one inches by about one foot deep, the depth of congelation at which the process of gathering the crop is generally commenced.

Indentures.—See *Apprentices' Indentures.*

Indian Corn. — See *Corn, Indian.*

Individuality. — Everything that belongs to humanity is capable of yielding hidden meanings to any one who will bring a penetrating eye and an interpreting mind to the study. No man can wear a hat or a pair of slippers for a month or two without putting some of his individuality into his garments. "The apparel oft proclaims the man." You may gain plenty of hints concerning character by looking keenly at a man's surroundings—the quality and arrangement of his furniture, books, pictures, ornaments. Without even going into a house, you may often give a shrewd guess at the character of the inmates, by a rapid glance at the windows, garden, fences, walls, doors, &c. There is expression in the way any one shakes hands with his friends; in the style in which a smoker holds a pipe or cigar, or puffs out its fumes; in the mode in which a pedestrian wields his stick or umbrella; in the manner of taking food, playing musical instruments, or singing songs. Some secret may be let out by the attitude a man takes when he is talking in a parlour or shop, the chair he selects, and the mode in which he sits upon it. The tones of the voice are full of meaning; the selection of phrases, the

structure of sentences. Everything that a man does, almost everything that he touches, may bear the stamp of his individuality.

Infant Management.—For the following excellent rules in infant management we are indebted to Dr. Waddington, who for twenty-six years has had considerable experience in the treatment of early infancy:—

No other kind of milk to be given to an infant in addition to the milk of the mother or wet-nurse.

The less rocking the better.

When asleep to be laid upon its *right* side.

The best food is biscuit powder, soaked for twelve hours in cold spring water, then *boiled* for half an hour, not *simmered*, or it will turn sour. Very little sugar to be added to the food, and then only at the time *when given*.

Sweets of every kind are most injurious, producing acidity, flatulency and indigestion, sores in the mouth, and disordered secretions.

An infant will take medicine the more readily if made lukewarm in a cup placed in hot water, adding a very little sugar *when given*.

The warm bath (at 94° of heat, *not less*, for ten minutes, every other night) is a valuable remedy in many cases of habitual sickness and constipation.

Sedatives and anodynes of every kind are most prejudicial. They stop the secretions. A very small quantity of laudanum given to an infant may produce coma and death.

When an infant is weaned, which is generally advisable at the age of nine months, it is of the utmost importance that it be fed with the milk of *one cow*, and *one only* (a milch cow), mixed with biscuit powder (prepared as before directed), and *very little sugar*.

Boiled bread pudding forms a light and nutritious dinner, made with stale bread, hot milk, an egg, and very little sugar.

When an infant is twelve months old, bread and milk should be given every night and morning. Stale bread, toasted, soaked in a little hot water, and then the milk (*of one cow*) added *cold*.

Solid meat is not generally required until the infant is about fifteen months old, and then to be given sparingly, and cut very fine. Roasted mutton, or broiled mutton chop (without fat), is the best meat; next to that, tender *lean* beef or lamb; then fowl, which is better than chicken; no pork or veal; no pastry or confectionery; no cheese; the *less butter the better*.

Ink, Marking, To Make.—Lunar caustic, two drachms; gum arabic, half a drachm; distilled water, two drachms. To be well mixed, and kept in a small stopper-bottle, and in a dark place, as the lunar caustic loses its virtue by being exposed to the light. The linen to be marked upon must be previously prepared with the following mixture:—Sub-carbonate of soda, half an ounce; gum arabic, one scruple; dissolved in one ounce of rain-water. With this mixture wet as much of the linen as is to be written on. Let it become perfectly dry. Then write upon it, and dry the writing in the sunshine as rapidly as possible.

Inks, Sympathetic.—These are preparations used for writing on paper, the marks of which are invisible until acted upon by some re-agent. They are frequently employed in secret or playful correspondence. By heating the paper until it is nearly scorched, they may be rendered visible.

1. Sulphate of copper and sal-ammoniac, equal parts, dissolved in water, writes colourless, but turns yellow when heated.

2. Onion juice, like the last.

3. A weak infusion of galls turns black when moistened with weak copperas-water.

4. A weak solution of sulphate of iron turns blue when moistened with a weak solution of prussiate of potash—black with infusion of galls.

5. The diluted solutions of nitrate of silver and terchloride of gold darken when exposed to the sun-light.

6. Aquafortis, spirits of salt, oil of vitriol, common salt, or saltpetre, dissolved in a large quantity of water, turn yellow or brown when heated.

7. Solution of nitromuriate of cobalt

turns green when heated, and disappears again on cooling.

8. Solution of acetate of cobalt, to which a little nitre has been added, becomes rose-coloured when heated, and disappears when cooling.

Insects of the Human Body.—What think you, reader, of your body being a *planet* inhabited by living races, as we inhabit the earth? The fact is even so. The human body is but a home for *parasites*, that crawl over its surface, burrow beneath its skin, nestle in its entrails, and riot and propogate their kind in every corner of its frame. The recent sensation in regard to *trichina* in swine flesh has set the scientific world thinking, and the result is the following:—*Parasites* not only inhabit the bodies of all animals used by us as food, but they are also found in abundance in our organisation. The species *trichina spiralis* of which so much has been said, and whose existence has been discovered in pork, is, according to our best anatomists, found in almost every muscle of the human body. It lies all along the fibres of the muscles, enveloped in little cysts of sacs, about one-fourth of an inch in length. It can be distinctly seen and examined only by the microscope.

One species of *strongle* chooses the heart for its dwelling-place, another inhabits the arteries, a third the kidneys. Myriads of minute worms lie coiled up in the voluntary muscles, or in the asolar tissue that connects the fleshy fibres. The *guinea-worm* and the *chique* bore through the skin and reside in the subjacent reticular membrane. *Hydatides* infest various parts of the body, but may be found especially in the liver and the brain.

A little *flake*, in general appearance much like a flounder, lives steeped in gall in the biliary vessels. If you squeeze from the skin on your nose what is vulgarly called a maggot—the contents, namely, of one of the hair follicles—it is ten to one you will find in that sebaceous cylinder several animalculæ exhibiting under the microscope a curious complicated structure. Even the eye has its living inmates.

With this knowledge of our composition, it matters but little how many *entozoa* we consume, so long as we do not see them; it is nothing more than all ages have done before us. We might, with as much propriety, refuse to drink water, which, however pure, is fairly alive with animalculæ, as refrain from the use of meat because it exhibits (under the microscope) *entozoa*.

Insects, On Making a Collection of.—Among the various sciences that come under the term *natural*, entomology certainly has its advantages. It is not like sea-weed collecting, confined to a certain class of localities; nor is the result of the best day's sport burdensome to the collector, who trudges home lightly laden, while his friend the geologist is sighing over an ammonite too bulky to carry, and too good to be left behind.

For preservation, few subjects of natural history are more easy, the insect cabinet exhibiting its treasures in the form and attitude of life, while the botanist must be content with the flattened effigies of the once graceful plants. If the definition of happiness is a correct one—keeping an object in view with the consciousness of continually drawing nearer to it—he who is engaged in making a collection of insects ought, humanly speaking, to be a happy man.

The first question usually asked by the aspiring youth who has been smitten by the sight of some well-filled cabinet, is, where to go to catch the insects?—a question that involves a lengthy reply, as there is scarcely a situation on the face of the earth in which some of the tribe are not to be found, as might be expected, when we learn that our own country alone furnishes about 12,000 different kinds, of the most various habits and instincts. At the same time, although it would be difficult to say where insects are not, there are certain localities where they especially congregate, and it will be serviceable to the beginner to have such places pointed out. Among the best that can be named are woods and forests, in which many insects of all the orders are to be found. Butterflies flutter along the sheltered glades, and in clear spaces open to the sunshine. The splendid

"Emperor" is found about oaks in the south of England, but requires a net mounted on a long pole for his capture, as his imperial pride leads him to prefer the upper branches. Fortunately for the collector, his majesty occasionally descends in hot weather to drink at some muddy pool. Many of the moths will be found flying in the day-time, but the greater number lie concealed until the evening, when they emerge from their hiding-places, and some of them continue their revels "till daylight doth appear."

A lantern strapped to the waist or hat is often serviceable on a dark night, the light being a great attraction to nocturnal insects. Immense numbers of moths have been taken of late years by the method termed "sugaring," which consists in making a syrup of coarse brown sugar, to which some add a little rum. On a favourable evening the moths will flock to the treat prepared for them, and indulge in the sweets till they fall to the ground from repletion. Their appetite, however, is subject to strange variations; and while on one evening they will come in swarms to the sugar, on another they will all decline the invitation.

The magnificent dragon-flies hover and sweep along with the butterflies, but far less peaceful in their occupation; and woe to any weaker insect that crosses their path. Numerous beetles also occur in such localities, many being attracted to certain trees, shrubs, and plants. Umbelliferous flowers are the favourite resort of several of the group termed longicornes, some of them preferring felled timber. Many kinds conceal themselves under loose bark, while others form a secure retreat by boring far into the wood. Caterpillars of various moths and butterflies feed on the foliage and herbage, and may be collected in numbers by holding a large net under the branches while they are beaten with a stick. For this purpose an open and inverted umbrella is a good substitute for the net.

Heaths, commons, and open fields are the home of numerous butterflies; and many of the predaceous beetles will be seen running in bright weather about the paths and sandy places, or lurking during the day under stones and clods. The herbage should be swept with a hoop net, made of strong canvas or cheese-cloth, for delicate materials will not stand the work. By this means multitudes of small beetles, and, indeed, small insects of all kinds, will be taken. The rails and fences should not be neglected, especially palings, which are a favourite resting-place for sundry moths, and nearly all wooden erections will show the round tunnels formed by the little boring beetles. Sandy commons are productive of many of the bee and wasp tribe (*hymenoptera*), and should be diligently searched by the collector of that order, especially on hot, sunny days.

Lanes with untrimmed hedges are often good places for collecting, especially if the soil is sandy. As a general rule, it may be observed, that sandy soils are far more favourable to insect life than clays. Chalk and limestone districts are usually productive. The hedge-banks will furnish many species, and generally show the burrows of wild bees and other *hymenoptera*.

The various flowers and plants in gardens are attractive to many butterflies and other insects, and are always worthy of a search when circumstances may prevent longer excursions. Petunia beds are patronised by some of the rare *sphingidæ*, and the humming-bird hawk moth is partial to the red valerian. A light placed in an open window looking into a garden or near a wood will often attract numbers of moths.

Sand and gravel pits will repay investigation, as many beetles, &c., reside in such places, and others often fall into them, or are blown in on windy days. Holes in the sides will show where insects have burrowed; a straw should be inserted as a guide, and the inhabitant dug out with a small trowel or digger.

Ponds and pools, as well as streams, should be fished with a hoop net of cheese cloth, or other strong open material for the water-beetles and bugs. They are very numerous in species, and though seldom remarkable for bright colouring,

are often curious in form and of interesting habits.

Although the best time for collecting is during the warmer portions of the year; yet even in the winter months much may be done. The water-beetles just mentioned are still to be taken, and will sometimes come to a hole broken in the ice. Then, as at other seasons, numerous beetles hide under bark, or live in burrows in the wood, but most of the insects of that order shelter themselves in moss, which should, therefore, be gathered, without much disturbance, and carried home in closely-tied bags, to be examined at leisure by shaking a little at a time over a white cloth. This is also the season for digging for the pupæ or chrysalides of moths. They are mostly found three or four inches in the ground where the roots of trees fork on the surface, and generally occur in that part of the fork nearest to the trunk.

Those who wish to make a general collection must seek for insects in more disagreeable situations than those hitherto mentioned. A large number of beetles are carrion feeders, most of them belonging to the group termed *necrophaga;* and as vultures feast on the carcase of a camel, so do these small scavengers revel in a dead cat or dog. Many species attach themselves to old bones and skin, and a still larger section burrow in cattle droppings, in fields, meadows and pastures.

Whoever will search diligently in the localities here indicated will meet with a great variety of insects, and in no long time may get up a collection, which, if not large in a scientific sense, will excite the wonder of the uninitiated, who could not have believed that so many different kinds existed.

To Preserve an Entomological Collection.—As rare and valuable specimens are frequently lost or injured by the attack of mites and decay, it is very important that the greatest care should be observed in preserving them. We recommend the following maxims and recipes for this purpose:—

1. Take care that your specimen boxes are quite air-tight, and the room in which you keep them is dry.

2. Be sure, when you kill your specimens, to relieve them of as much superfluous matter as possible. This may be done in the larger kinds by nipping up the under side of the abdomen and gently expressing the intestines.

3. It is very useful to have a lump of camphor at one or all of the corners of the box. This should be renewed from time to time, as the strength evaporates.

4. To prevent the attack of mites, put a tea-spoonful of well-pounded corrosive sublimate into a pint of spirits of wine. Let this settle for some hours, then draw it off into a clean bottle. When the solution is applied to black substances and little white particles are seen on them, the liquid is too strong, and a litttle alcohol must be added. Apply this with a fine camel-hair brush, and remember that every separate member of the insect must be infected.

5. If at any time one of the specimens becomes covered with mould, it may be removed with a fine camel-hair pencil, dipped in camphorated spirits of wine; but be careful not to replace the insect in the cabinet.

Interest Table, for One Year.—

Principal.	2½ per cent.			3 per cent.			3½ per cent.			4 per cent.			5 per cent.		
£	£	s	d	£	s	d	£	s	d	£	s	d	£	s	d
1000	25	0	0	30	0	0	35	0	0	40	0	0	50	0	0
900	22	10	0	27	0	0	31	10	0	36	0	0	45	0	0
800	20	0	0	24	0	0	28	0	0	32	0	0	40	0	0
700	17	10	0	21	0	0	24	10	0	28	0	0	35	0	0
600	15	0	0	18	0	0	21	0	0	24	0	0	30	0	0
500	12	10	0	15	0	0	17	10	0	20	0	0	25	0	0
400	10	0	0	12	0	0	14	0	0	16	0	0	20	0	0
300	7	10	0	9	0	0	10	10	0	12	0	0	15	0	0
200	5	0	0	6	0	0	7	0	0	8	0	0	10	0	0
100	2	10	0	3	0	0	[illegible]	10	0	4	0	0	5	0	0
90	2	5	[illegible]	2	14	0	3	3	0	3	12	0	4	10	0
80	2	0	0	2	8	0	2	[illegible]	0	3	4	0	4	0	0
70	1	15	0	2	2	0	2	9	[illegible]	[illegible]	[illegible]	0	3	10	0
60	1	10	0	1	16	0	2	2	0	2	8	0	3	0	0
50	1	5	0	1	10	0	1	15	0	2	0	0	2	10	0
40	1	0	0	1	4	0	1	8	0	1	12	0	2	0	0
30	0	15	0	0	18	0	1	1	0	1	4	0	1	10	0
20	0	10	0	0	12	0	0	14	0	0	16	0	1	0	0
10	0	5	0	0	6	0	0	7	0	0	8	0	0	10	0
9	0	4	6	0	5	4¾	0	6	3¾	0	7	2½	0	9	0
8	0	4	0	0	4	9½	0	5	7½	0	6	4¾	0	8	0
7	0	3	6	0	4	2¾	0	4	10¾	0	5	7¼	0	7	0
6	0	3	0	0	3	7¼	0	4	2½	0	4	9½	0	6	0
5	0	2	6	0	3	0	0	3	6	0	4	0	0	5	0
4	0	2	0	0	2	4¾	0	2	9½	0	3	2½	0	4	0
3	0	1	6	0	1	9½	0	2	1¼	0	2	4¾	0	3	0
2	0	1	0	0	1	2¾	0	1	4¾	0	1	7¼	0	2	0
1	0	0	6	0	0	7¼	0	0	8½	0	0	9½	0	1	0

The following is an example of the manner in which the preceding table is used.

EXAMPLE.—Required the interest on £1070 for one year, at 3½ per cent.—

By the Table, £1000 for one year, at 3½ per cent., is	£35	0	0
Do., £70, do., do.	2	9	0
The interest required is	£37	9	0

N.B.—For 2 per cent., take one-half of 4 per cent.

Interrupted Reply, GAME OF.—The company place themselves in a circle. The one who commences says in a whisper to his right-hand neighbour, "Of what use is a book?" (or any other article he may select).

His neighbour must answer correctly, "It is of use to read," and then ask another question of *his* right-hand neighbour—for instance, "Of what use is a goblet?"

The art in this game consists in so framing one's questions altogether unsuited to the preceding question. If the answer is, "It is of use to drink from," a laughable consequence ensues; for, when the round is finished, or in other words, when the person who has commenced the game has been questioned in his turn, the questions and answers are repeated aloud, by taking the answer of the person on the player's right as a reply to the question of the person on his left; it follows, that to the question, "Of what use is a book?" one of the company has answered, "It is of use to drink from;" and so on with the rest of the questions and answers.

Invitations, ETIQUETTE OF.—If you ask a person to dinner, let it be a week or ten days in advance, because, to ask a person only a day or two before, looks as if you had been disappointed of somebody else, and had asked him as a mere stop-gap.

Be particular, likewise, to specify the day on which you wish for his company. Do not say you will be glad to see him on either of two days, as Tuesday or Wednesday next. And why? Because the person may not wish to dine with or visit you at all; and so far from a choice of days being thought an act of kindness, it may be considered one of servility, if not rudeness. Always state only one day; and let the invitation, like the answer, be unequivocal.

Invitations for several weeks in advance are almost as bad as invitations for alternate days; because long invitations convey the impression that the inviter is desperately bad off for guests, and wishes to ensure a number at all risks. The person invited is also apt to feel that it is not *his* pleasure or convenience that is consulted; and to raise a feeling of this kind is anything but consistent with true politeness.

The receiver of an invitation has a duty to perform as well as its giver. It is incumbent on him to say *yes* or *no* at once—not to allow a post or a day to elapse before answering. The reason is obvious; a delay on his part looks as if he were waiting for a better invitation before he made up his mind. Not to send a speedy reply, therefore, is one of the worst pieces of breeding of which a man can be guilty. It is also not using the invited well; for a dinner-party usually consists only of a certain number, and if you cannot accept the invitation, say so, in order that time may be allowed to invite another person in your place.

An invitation may be refused, or you cannot have a will of your own; but the refusal should be couched in the kindest, briefest, and most polite terms.

Ipecacuanha.—See *Adulterations*.

Isinglass.—Isinglass is a preparation formerly only made from the sturgeon, but is now obtained from the entrails of most other fishes. When good, it consists almost wholly of pure *gelatine*, or glue, which is nutritious. It is free from taste and smell, and is soluble in warm water. Being nothing more than the membraneous parts of fishes, it can probably be made from the fish on the coasts in this country. The sounds, or air-bladders, of fresh-water fish are generally preserved for this purpose. It is best made in the warm season. It is sometimes used as a medicine; but boiled in milk, it forms a nutritious jelly, and is the substance of blancmange. It is also used for refining

coffee, vinous liquors, and cider. (See *Adulterations*.

Ivory, Carved, Imitation of.—This is an elegant amusement for all who are of an ingenious disposition. A wooden box or card case, or any other article you wish to ornament, is required for this purpose. If they are not made of smooth, white wood, use the following composition to cover them:—Half an ounce of isinglass, boiled gently in half a pint of water till dissolved; then strain it, and add flake white, finely powdered till it is white as cream. Give the box three or four coats of this solution, letting each dry till the other is laid on; then smooth it with a bit of damp rag. When the composition is perfectly dry, put on the imitation carved ivory figure, which make as follows:—Boil half a pound of best rice in one quart of water, till the grains are soft enough to bruise into a paste; when cold, mix it with starch powder till you make it as stiff as dough; roll it out about as thick as a shilling. Cut it into pieces two inches square, and let it dry before a moderate fire; these cakes will keep many months, and be fit for use if kept dry and free from dust.

When required for use, get a coarse cloth, make it thoroughly wet, then squeeze out the water, and put it on a large dish, four times double; place the rice cakes in rows between this damp cloth, and when sufficiently soft to knead into the consistence of new bread, make it into a small lump; if too wet, mix it with more starch powder; but it must be sufficiently kneaded to lose all appearance of this powder before you take the impression—to do which, you must procure some gutta percha, half an inch thick; cut it into pieces about two inches square, and soften it in hot water; then get any real carved ivory you can, and take off the impression on the pieces of gutta percha, by pressing it carefully upon the carved ivory till a true impression is taken. When the moulds are quite dry and hard, and your paste in a proper state, with a small camel-hair brush lightly touch with sweet oil the inside of the mould you are going to use, and then press the rice paste into it; if the impression is quite correct on removing it, take a thin, sharp, small dinner knife, and cut the paste smoothly, just so as to leave all the impression perfect; then, with a sharp-pointed pen-knife, trim all the rough edges, and, with Ackermann's cement, place your figures on the box, in large or small pieces, just as your own taste directs. The figures adhere better if put on before they are quite dry. Sometimes, from frequent kneading, the paste gets discoloured; these pieces should be set aside, and used separately, as they can be painted in water-colours, to imitate tortoiseshell or carved oak; this should be done after being stuck to the box. Having completed your work, finish by varnishing it very carefully with ivory varnish, which should be almost colourless. This design so nearly resembles carved ivory, that it has been mistaken for it when nicely done, and it is very strong if carefully cemented, and looks well for boxes, card cases, &c., either as ivory or tortoiseshell.

Ivory, To Preserve the Colour of.—The simplest means of preserving ivory white is by securing it from contact with the air under a bell-glass. In such a situation ivory improves in whiteness, however much disposed to turn yellow, and by exposing it when thus covered to the rays of the sun, yellow ivory is bleached. To remove the dust which settles in the cavities of carved ivory, it must be brushed with warm soap and water, or powdered pumice-stone and water may be used; but it is especially necessary to expose anything which requires whitening to the full action of the light under the bell-glass. Alum-water injures ivory.

Jalap.—See *Adulterations*.

Jams, To Preserve from Mould.—Cut a round circle of writing-paper, the size of the interior of the pot, and one about an inch and a half larger. Take the white of an egg, and a paste-brush, and lay a coating of white of egg over the surface of the smaller circle, and then lay that piece on the top of the jam, with the untouched side of the paper next to the jam. Take the larger piece, and coat that on one side with white of egg,

and let the surface thus coated be the one turned inwards. This circle is to cover the pot; and the white of egg renders it adhesive, and pastes it firmly down all round the edge of the pot. But, of course, much depends on the store-cupboard in which they are kept, as damp will mildew the best of preserves.

Japanese Customs.—Japan is a land of contradictions and inversions. We weep at misfortunes, the Japanese laugh; our mourning garments are black, theirs white; we think white teeth beautiful, Japanese ladies varnish their teeth black; we prefer sweet fruit, they sour; their horses stand with their heads to the stable door; their horses' shoes are of straw; they mount a horse on the off side; they make saucepans of paper; they put on the roof of the house first, and afterwards build the walls; their carpenters draw the plane towards them; their tailors in stitching point the needle from them; in their locks the key turns from left to right; old men in Japan fly kites, and spin tops, while children look on; Japanese books begin where ours end; Japanese writers use paint brushes, not pens, and write from top to bottom, from right to left; in Japan there are no lawyers; and Japanese doctors never make any charges, or send in any bills.

Jars.—See *Fruit Jars.*

Jaumange.—Pour on the very thin rind of a large lemon and half a pound of sugar, broken small, a pint of water, and keep them stirred over a gentle fire until they have simmered for three or four minutes; then leave the saucepan by the side of the fire, that the syrup may taste well of the lemon. In ten or twelve minutes afterwards, add two ounces of isinglass, and stir the mixture often until this is dissolved; then throw in the strained juice of four sound, moderate-sized lemons, and a pint of sherry; mix the whole briskly with the beaten yolks of eight fresh eggs, and then pass it through a clean, delicate hair sieve; next thicken it in a jar or jug, placed in a pan of boiling water, turn it into a bowl, and, when it has become cool and been allowed to settle for a minute or two, pour it into moulds which have been laid in water.

Jellies, Clear and Ornamental.—A plain kind of calf's-foot jelly can be made with ale and vinegar, instead of wine and lemon-juice. The stock may also be prepared from cow-heels. They produce a jelly which, though firm and clear, is perhaps not quite so free from meat flavour. The flavour may be varied by substituting for the wine some maraschino, noyeau, or curaçao. Spices, such as coriander seeds, allspice, cinnamon, and cloves, may likewise be used. Orange and lemon jellies are made by flavouring the clarified stock wine with a syrup of the juice of these fruits, with some of their rind boiled in it. A little cochineal is sometimes used to impart a richer tint to the jelly. Similar clear jellies may be made with isinglass gelatine or hartshorn shavings; four and a half ounces of the first, or half a pound of the last, being equivalent to the above-mentioned number of calf's feet. They are treated precisely in the same way. More *ornamental* jellies may be made by introducing ripe or preserved fruits, cut in slices, and arranged in layers alternately with the jelly, or otherwise embedded in it. In doing this, however, each layer of jelly must be allowed to set before the next one of fruit is added, else the two will become mingled, thus spoiling the appearance of the whole.

Joints, Economy of.—There is a great difference in the economy of certain joints of meat. A leg of mutton, in my opinion, is the most economical, a boiled neck of mutton the most extravagant. It may be useful for the young housekeeper to know that a roast leg of mutton weighing 10 lbs. ought to make from fifteen to eighteen dinners; a piece of boiling beef will yield the same; but roasting beef is more extravagant—the bone in a piece of the ribs or sirloin weighs so much.

As a rule, we do not make as much soup in our households as we ought to do. All the bones should be saved and stewed for hours. The liquor in which beef, mutton, and even bacon is boiled should be kept to make stock for soup; with an addition now and then of part of shin of beef, or a shilling's worth of bones from the butcher, you can nearly always have soup for the

late dinner where there is a family of eight or ten. The cook should be ordered to preserve all the dripping, taking care to keep the beef dripping separate from the rest, as it can be used for making pastry.

Kaleidoscopes, To Make.—The mode in which these interesting instruments are made is very simple. Take a hollow tube, of any dimensions, and of any length—two inches in diameter, and 12 long, is a convenient size. Take two pieces of glass, about 1½ in. in diameter, and 1-12th in. thick, of a length somewhat shorter than the tube itself, and let them be fixed so that one edge may touch the other, and so as to form an angle with each other of 22½°; a few bits of cork may be so notched as to keep the pieces of glass in their places. The glasses are to be darkened by black painting, or some other convenient method, on the exterior sides. At one end of the tube provide two circular pieces of plain clear glass, exactly the diameter of the tube into which they are to be fitted. Place between these two glasses a quantity of broken pieces of different coloured glass—the more intense and various the colours, the more brilliant the forms will be—and let the pieces of broken glass be so placed as to move freely as the tube is turned round. At the opposite end of the tube, let there be a small hole for the light, and the instrument will then be complete.

Kings and Queens of England, A Table of the.—

Name.	Began Reigning.	Reign Ended.	Buried.
William the Conqueror	1066, December 25	1087, September 9	Caen, Normandy
William Rufus ...	1087, September 27	1100, August 2	Winchester
Henry I.	1100, August 5	1135, December 2	Reading
Stephen	1135, December 26	1154, October 25	Faversham
Henry II.	1154. December 19	1189, July 6	Fontevraud
Richard I.	1189, September 3	1199, April 6	Fontevraud
John	1199, March 27	1216, October 19	Worcester
Henry III.	1216, October 28	1272, November 16	Westminster
Edward I.	1272, November 16	1307, July 7	Westminster
Edward II.	1307, July 7	1327, January 13	Gloucester
Edward III.	1327, January 13	1377, June 21	Westminster
Richard II.	1377, June 22	1399, September 29	Westminster
Henry IV.	1399, September 30	1413, March 20	Canterbury
Henry V.	1413, March 20	1422, August 31	Westminster
Henry VI.	1422, September 1	1461, March 2	Windsor
Edward IV.	1461, March 4	1483, April 9	Windsor
Edward V.	1483, April 9	1483, June 20	Unknown
Richard III.	1483, June 20	1485, August 22	Leicester
Henry VII.	1485, August 23	1509, April 21	Westminster
Henry VIII.	1509, April 21	1547, January 28	Windsor
Edward VI.	1547, January 28	1553, July 6	Westminster
Mary	1553, July 9	1558, November 17	Westminster
Elizabeth	1558, November 17	1603, March 24	Westminster
James I.	1603, March 24	1625, March 27	Westminster
Charles I.	1625, March 27	1649, January 30	Windsor
Charles II.	1649, January 30	1685, February 6	Westminster
James II.	1685, February 6	1688, December 10	Paris
William and Mary ...	1689, February 13	1702, March 8	Westminster
Anne	1702, March 8	1714, August 1	Westminster
George I.	1714, August 1	1727, June 11	Hanover
George II.	1727, June 11	1760, October 25	Westminster
George III.	1760, October 25	1820, January 29	Windsor
George IV.	1820, January 29	1830, June 26	Windsor
William IV.	1830, June 26	1837, June 20	Windsor
Victoria	1837, June 20	God save the Queen!	

Ketchup, Walnut.—When walnuts are full ripe, and ready for eating, take the green outside shells, put them into a jar with as much strong vinegar (cold) as will perfectly cover them, and tie them up securely for twelve months. Then strain them, and press the juice out through a strong sieve, and for every gallon of liquor take—sardines, chopped small, six ounces; three heads of garlic, peeled; Jamaica pepper, one ounce; cloves, one ounce; mace, three quarters of an ounce; black pepper, one ounce; ginger, sliced, one ounce; port wine lees, one quart. Let the ketchup boil up, and then simmer ten minutes; skim it well, and put it away for twenty-four hours; then boil it until reduced one half. When cold, bottle it for store, and cork and wax it well.

Lace, Blond, To Wash.—Detach the blond from the caul, but not from the quilling of a cap. Fold it evenly in four lengths, if scalloped at the edge, take care that the scallops lie over each other. Tack it evenly, first along the scalloped edge, next where it joins the quilling, wet it in cold soft water, soap it well with common soap, yellow or white, taking care that there is no gravelly roughness in the soap; lather it lightly, and do not rub too hard. If very dirty, use two or three waters, repeating the process of lathering. Rinse it finally in soft, cold water, and when quite free from soap, dip it in water very highly blued, with about a teaspoonful of made starch to a quart of water. Squeeze it, then lay it between the folds of a cloth, pull the tacking threads out, and unfold, then iron before it is dry. The iron must not be plied lengthways, but in short strokes from the quilling to the scallop, or edge if it is not scalloped. Next detach the blond from the quilling and finally pass the iron lightly *along* the blond, without straining it; roll it on a card ready for use. Quilling is more difficult to wash, but that material is cheap compared to the blond, all patterns of which, under the process pointed out, may be washed a dozen times, keeping its colour and gloss, and not to be distinguished from new. White gauze ribbon may be cleaned in the same manner. The points to be kept in view are, to use cold water, to iron before it is dry, and to purchase good material that will bear washing.

Ladies, Superscription of Letters to.—In writing to the Queen, the form of address runs thus:—"Madam, may it please your Majesty," the superscription on the letter being uniformly—"To the Queen's Most Excellent Majesty." It is presumed that her Majesty listens to the request of the petitioner; she is therefore feigned to be present, and being present is addressed with the pronoun *you*. To write otherwise is a breach of etiquette.

The superscription of letters sent to ladies follows the same rule as that which serves for a gentleman, merely changing the pronoun from *him* to *her*, thus—"To her Grace the Duchess of A." The wife of a baronet or knight is styled "Lady."

A lady who derives the title of "Honourable" by descent, as the daughter of an earl or viscount, if marrying a private gentleman, is always addressed by her Christian name; thus—"The Honourable Charlotte de Courcy." Whereas the wife of a gentleman who bears the title of "Honourable" by virtue of birth, or some official situation, is addressed as—"The Honourable Mrs. C."

Lammas Day.—This day is now only used as a day of term for some purpose. It was formerly held as a day of thanksgiving for the new fruits of the earth. The word is derived from the Saxon *Hlaf-masse* (loaf-mass) the *f* being in time softened away. The shepherds in Scotland, till the middle of the last century, held festive meetings on Lammas Day on the tops of the most conspicuous hills.

Lamp, Argand, Methods of Cleaning.—The management of a table-lamp of any kind is rather a difficult business, and one which the mistress should consider as her duty, for servants are not to be entrusted with it. Great care should be taken in the purchase to obtain one from a maker of known reputation, for the cheap ones, particularly those picked up at brokers' shops, are always out of repair.

The principle of the Argand lamp (so named after its inventor, a Frenchman)

is, that a free current of air should be drawn through the centre of the flame, and to ensure this, it is necessary to clean the lamp frequently, and remove any dust or impurities from the oil or charcoal of the wick, which collects in the small holes in the rim, through which the cold air is drawn. If the lamp is used every night, it should be cleaned daily. The methodical mode is this:—

Remove the shade carefully before you soil your hands with the oil. Provide a bottle of warm water (a little above blood heat), and in this first wash the glass chimney, then pour the oil from the fountain, and remove any sediment from about the brass work; screw up the wick, and if it is not long enough for the time it may probably be required to burn, replace it with a fresh one, by means of the stick. Having washed all the brass work, wipe the parts carefully, screw everything in its former position, and take care, in replacing the wick, that the small notch at the side of the brass enters the groove which is sunk to receive it; turn it up and down once or twice, to make sure that it works freely; then prime it (that is, singe the top), replace the fountain (filled with oil), chimney, and shade; the lamp is now ready for use.

Purchase the best oil, as the inferior qualities emit an offensive smell, and produce so much sediment that the delicate works of the lamp are quickly clogged, and the current of air impeded, which causes it to burn dimly.

Occasionally it is necessary to wash the shade, which should be done in clean, lukewarm water, with the admixture of a little soda, which removes all stains and does not injure the appearance of the ground glass. The glass chimneys will sometimes crack with the heat, particularly in frosty weather. This may be prevented by scoring a small notch in the glass at top and bottom.

Lands of the United Kingdom.—The total acreage of the United Kingdom amounts to about 77,500,000, and of these we have 46,000,000 under all kinds of crops, bare fallow, and grass; and out of these 46,000,000 there are 23,000,000 acres of permanent pasture, meadow, or grass. This leaves 31,500,000 acres waste, or totally unaccounted for.

Language of Flowers.—See *Flowers, Language of.*

Lard.—See *Adulterations.*

Leap Year. — See *Calendar Months.*

Leaves and Flowers, To Take Plaster Casts of.—The leaf, as early as convenient after being gathered, is to be laid on fine-grained moist sand, in a perfectly natural position, with that surface uppermost which is to form the cast, and to be banked up by sand, in order that it may be perfectly supported. It is then, by means of a broad camel-hair brush, to be covered over with a thick coating of wax and Burgundy pitch, rendered fluid by heat. The leaf is now to be removed from the sand, and dipped in cold water—the wax becomes hard, and sufficiently tough to allow the leaf to be ripped off without altering its form. This being done, the wax mould is placed in moist sand, and banked up as the leaf itself was previously; it is then covered with plaster of Paris, made thin, due care being taken that the plaster be nicely pressed into all the interstices of the mould by means of a camel-hair brush. As soon as the plaster has set, the warmth thus produced softens the wax, which, in consequence of the moisture of the plaster, is prevented from adhering to it; and, with a little dexterity, it may be rolled up, parting completely from the cast without injuring it in the least. Casts obtained in the manner thus described are very perfect, possessing a high relief, and form excellent models, either for the draughtsman or for the moulder of architectural ornaments.

Legacies.—See *Wills.*

Lent.—Ash Wednesday is the first day in Lent, and is observed as a holiday of the Church of England. The Wednesday, Friday and Saturday after the first Sunday in Lent are called Ember Days, and the week in which they occur Ember Week. (See *Ember Days*).

Letter Writers, Hints to.—Write to an absent person as you

would speak to the same party if present.

Be clear and definite in your expressions.

Be especially mindful of brevity and conciseness; lengthened periods are as much out of place in a letter as they would be in conversation.

Avoid far-fetched words and studied phrases.

The distance which either age, rank, sex, or any other circumstance occasions, ought always to be remembered. We should never forget what we are, and what the person is whom we address.

Letters of politeness should be restricted to the circumstances calling for them.

In letters of recommendation truth should never be sacrificed to condescension, false kindness, or politeness.

In letters of business write all that is necessary, in a clear and distinct manner, and nothing more.

It is a maxim with the discreet never to give advice until they have been thrice asked for it.

In letters of excuse the writer must not forget that almost as much depends on the time as the manner of making an excuse; it may be too late to be effective; or so mistimed as to aggravate the previous offence.

We ought not to write anything of which we may hereafter be ashamed.

In a letter of intelligence, whenever the nature of the news communicated will permit, cull with taste, and relate without preamble.

State nothing but the truth; avoid mere scandal; and reject whatever is merely dubious, or, at least, state it to be so.

If you have, by mistake, communicated any false intelligence, be the first to correct it:—it is graceful to retrace one's steps when led astray.

Never commit the gross error of using the first person at the conclusion of a note which has been commenced in the third.

Every letter that is not insulting merits a reply, if it is necessary.

If a letter contains a request, accede to it gracefully and without ostentation, or refuse without harshness.

In all replies it is usual to acknowledge the receipt, and to mention the date of the last letter received.

In answers to letters of business, the substance of the communication to which the writer is about to reply, is generally stated, as this will guard against any possibility of your expressions being mistaken or misrepresented.

Never suffer letters to remain long unanswered; irregularity in this particular is a mark of the greatest disrespect to a correspondent.

Remember that among persons moving in good society, and, indeed, on any occasion, false grammar, or incorrect spelling, is a great disgrace.

A parenthesis is objectionable, if it break the sense and distort the sentence.

Comparisons are sometimes felicitous, but they must be made with care; their merit consists in the unity of their terms.

Allusions are elegant, when introduced with ease and easily understood.

Proverbs and *jeux-de-mots* are inelegant; if the latter are admitted, it should be sparingly.

The usual contractions in the English language are permitted in letters between friends, relations, and equals. They are unobjectionable in letters on business, but are held disrespectful when used by an inferior addressing a superior.

Punctuation is of the greatest importance; without it there can be no clearness, strength, or accuracy.

Never omit dating a letter.

Avoid all fantastic modes of folding.

Take particular care that the superscription of a letter is written in a bold and distinct manner, that it may readily meet the postman's eye. (See *Archbishop, Bishop, Baronet, Duke, Earl, &c.*

Letters of Administration.—See *Wills.*

Licence for Dogs.—Licence for every dog, of whatever description or denomination, 7/6. (Penalty of £5 for keeping a dog without a licence.) Provided always that no person shall be chargeable with duty to any greater amount than £23 2s. for any number of hounds, or £9 for any number of greyhounds, kept by him in any year.

Lichen.—In Botany this is the name of an extensive division of cryptogamous plants, constituting a genus in the order *Algæ* in the Linnæan system, but now forming a distinct natural order called *Lichenaceæ.* The general mode of growth of these plants is that of a thin, flat crust, spread over rocks and the bark of trees. Sometimes they spring from the ground and shoot out tiny branches like miniature shrubs; and sometimes they appear as a mere gelatinous mass, or a fine powdery substance. Among them are included the Iceland moss, on which the reindeer feed, which, however, is quite distinct from the true mosses. Lichens abound chiefly in the cold and temperate parts of the world. Their chief use appears to be the preparation of the surface of the earth for the growth of large vegetables; but some kinds, as those above named, are of direct essential service to man, possessing tonic and strengthening properties. They are also useful in the arts, furnishing the dyer with many brilliant colours. An acid peculiar to some varieties has been extracted, and termed *lichenic acid*; it appears to be identical in its character with *malic acid.* A peculiar vegetable starch, called *lichinin*, is obtained from the *liverwort*; it is said to possess the alkaline property of combining with acids.

Life, Theory of.—The late Professor Faraday adopted the theory that the natural age of man is one hundred years. The duration of life he believed to be measured by the time of growth. When once the bones and epiphyses are united, the body grows no more; and it is at twenty years this union is effected in man. In the camel it takes place at eight; in the horse at five; in the lion at four; in the dog at two; in the rabbit at one. The natural termination is five removes from these several points. Man being twenty years in growing, lives five times twenty years, that is, one hundred; the camel is eight years in growing, and lives five times eight years, that is to say, forty years; the horse, five years in growing, and he lives twenty-five years; and so with other animals. The man who does not die of sickness, lives everywhere from eighty to one hundred years. Providence has given to man a century of life, but he does not attain it, because he inherits diseases, eats unwholesome food, gives licence to passions, and permits vexations to disturb his healthy equipoise; he does not die, he kills himself. The Professor divides life into equal halves—growth and decline—and these into infancy, youth, virility, and age. Infancy extends to the twentieth year; youth, to the fiftieth, because it is to this period that the tissues become firm; virility from fifty to seventy-five, during which the organism remains complete; and, at seventy-five, old age commences to last a longer or shorter time, as the diminution of reserved forces is hastened or retarded.

Light.—Light is of three distinct colours—red, conveying heat; yellow, conveying light; and blue, conveying chemical action. The three combined form a colourless mixture. Light travels about 192,000 miles in a second; it could pass round the earth in the eighth of a second. Light from the moon to the earth, in one and a quarter seconds; from the sun in eight minutes; from Jupiter in fifty-two minutes; from Uranus in two hours. Light from a fixed star of the first magnitude, three to twelve years; second magnitude, twenty years; third magnitude, thirty years; fourth magnitude, forty-five years; fifth magnitude, sixty-six years; sixth magnitude, ninety-six years; seventh magnitude, a hundred and eighty years; twelfth magnitude, four thousand years. The late Sir William Herschel stated, in writing upon the power of telescopes to penetrate into space, that the light from the brilliant nebulæ, seen by him at that time by means of his powerful telescope, cannot have been less [illegible],000,000 years in its progress.

Linen, How to Choose.—In choosing linen or cambric, examine the threads, if they are even or close; a raw linen with uneven threads does not wear well. Fine linens answer better than the coarse ones, provided they are not unsuitable for the use for which they are destined. The wide linens are not thought so strong and well made as those of

narrower width, but the latter will not always cut out to the same advantage as the wider ones. Cheap linens are particularly to be avoided by the economist, as table and other household linen should be purchased on the presumption that they have strength and durability for the wear of many years. It is not convenient to every lady to purchase these expensive articles of very fine materials; but, when it can be done, it is advisable, for it is cheapest in the end, on account of their durability; and, in washing, the colour is more easily preserved in fine than in coarse linens.

Linen, SWEET BAGS FOR.—These may be composed of any mixtures of the following articles:—Flowers, dried and pounded; powdered cloves, mace, nutmeg, and cinnamon; leaves, dried and pounded, of mint, balm, dragonwort, southernwood, ground ivy, laurel, hyssop, sweet marjoram, origanum, rosemary; woods, such as cassia, juniper, rhodium, sandal wood, and rose wood; roots of angelica and orris; all the fragrant balsams; ambergris, musk, and civet. These latter should be carefully used on linen. (See *Ambergris*.)

Lime Juice.—See *Food Solvents*.

Lips, CHAPPED. — Beautiful lips are regarded by all persons as indispensable requisites to prettiness in a lady. Nothing but excellent general health will impart to them that charming ruby tint which so delights the observer. It has been said by the most reliable medical authorities, that a red under lip is one of the surest indications of good health; and it may be well added that, it is one of the most irresistible fascinations of which a young lady can be possessed.

The weather affects the lips of some persons to such an extent as to disfigure their beauty, as well as to cause much pain from soreness. A strong wind, united with a cold atmosphere, will frequently cause so great an irritation of the delicate skin of the lips that weeks will sometimes elapse before the effects will be entirely effaced. Ladies should, therefore, be quite scrupulous in guarding their faces from cold and wind, especially in riding.

In warm weather, cold water may be used in washing the face and lips, without fear of their becoming chapped; but, in cold weather, both cold or hot water, as also soap, should be avoided. Pure tepid rain-water will be found to be the least irritating to a delicate complexion, and a preventive against chapped lips.

Much may be done to restore the lips to their natural state, when they have become inflamed or chapped, by a timely application of some well-prepared emollient.

An elegant LIP SALVE may be made in the following simple manner: put half a pound of fresh lard into a pan, with an ounce and a half of white wax; set it on a slow fire till it is melted; then take a small tin dish, fill it with water, and add a few chips of alkanet root; let the water boil till it becomes a beautiful red colour; strain some of it, and mix it with the other ingredients, according as may be desired; scent it with some agreeable and favourite extract, and then pour it into small white jars or boxes.

Or—Seven or eight ounces of sweet almond oil, four ounces of prepared suet, an ounce and a half of white wax, eighteen drops of ottar of roses, and about two ounces of spermaceti; steep a very little alkanet root in the oil, and strain carefully before using. Melt the suet (mutton), spermaceti, and wax, well together, then add the ottar and caloric oil. (See *Glycerine*.)

Liquids, TO KEEP HOT.—It is often said that vessels of polished metal should be used for this purpose. These metals are good conductors of heat, but by contact readily part with it. The best vessels to keep liquids hot for a length of time are those made of earthenware and coated with metal—the former material being a bad conductor of heat, and polished metal an equally bad radiator.

Listening, THE ART OF.—Knowing *how to listen* is a rare gift. We are acquainted with a lady, whom we have seen every day for the last twelve years, and who, thanks to a charming vivacity of mind, has never, in all that time, allowed me to finish a single sentence! People

like her imagine that they always know, from the first words you utter, what you are going to say; and so, without waiting to hear it, they cut you short, and reply with volubility and energy, to what you did not say, and never intended to say, nor even perhaps thought.

It would be a good plan to say to these people, "Suppose you could condense into a single sentence the wisdom of Bacon, the wit of Pope, and the eloquence of Burke—be sure not even such a sentence could afford half as much pleasure to the person you have interrupted, as his own sentence would have done, if you had allowed him to finish it."

Another kind of person is busy, while you are speaking, in thinking how he shall answer you properly. His brains go off on this scent at the first sound of your voice; and while he is seeking for something new and witty in the cupboards of his mind, he can spare but a small part of his attention for following you, and his reply *may* be ingenious and witty, but it will be inapplicable.

We will not stop to mention those people who are incapable of sustaining their attention, and who therefore stare at you with a stupid astonished air; giving a weak smile from time to time, never in the right place, and generally very much in the wrong.

Truly the back-handed compliment once paid to a very dull gentleman was not without wit and perspecuity—that "he had a great talent for silence." It is a talent some people would do well to cultivate.

Silence and talkativeness have been the frequent themes of poets. Shakespeare says of a chatterer—

"O, he's as tedious
As is a tired horse, or railing wife;
Worse than a smoky house:—I had rather live
With cheese and garlic, in a windmill, far,
Than feed on cates, and have him talk to me,
In any summer-house in Christendom."

Cowper describes a similar character thus:—

"Words learn'd by rote a parrot may rehearse,
But talking is not always to converse;
Not more distinct from harmony divine,
The constant creaking of a country sign."

Young, in a felicitous manner, thus adverts to the advantages of listening;—

"A dearth of words a woman need not fear,
But 'tis a task indeed to learn—to hear:
In that the skill of conversation lies
That shows or makes you both polite and wise."

Liver.—See *Exercise*.

Lobster Sauce.—Take the body of a boiled lobster cut or torn into small pieces, and mix it with melted butter and a little rich beef gravy, seasoning according to taste; boil them up, turning one way. The spawn of the lobster may be added to the sauce.

Lodger's Goods Protection Act.—August 16th, 1871.—*An Act to Protect the Goods of Lodgers against Distresses for Rent due to the Superior Landlord.*—Whereas lodgers are subjected to great loss and injustice by the exercise of the power possessed by the superior landlord to levy a distress on their furniture, goods, and chattels, for arrears of rent due to such superior landlord by his immediate lessee or tenant:—

Be it enacted by the Queen's most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows (that is to say):—

1. If any superior landlord shall levy or authorise to be levied a distress on any furniture, goods, or chattels of any lodger for arrears of rent due to such superior landlord by his immediate tenant, such lodger may serve such superior landlord, or the bailiff or other person employed by him to levy such distress, with a declaration in writing made by such lodger, setting forth that such immediate tenant has no right of property or beneficial interest in the furniture, goods, or chattels so distrained or threatened to be distrained upon, and that such furniture, goods, or chattels are the property or in the lawful possession of such lodger; and also setting forth whether any and what rent is due and for what period from such lodger to his immediate landlord; and such lodger may pay to the superior landlord, or to the bailiff or other person employed by him as aforesaid, the rent, if any, so due as last

aforesaid, or so much thereof as shall be sufficient to discharge the claim of such superior landlord. And to such declaration shall be annexed a correct inventory, subscribed by the lodger, of the furniture, goods, and chattels referred to in the declaration; and if any lodger shall make or subscribe such declaration and inventory, knowing the same or either of them to be untrue in any material particular, he shall be deemed guilty of a misdemeanour.

2. If any superior landlord, or any bailiff or other person employed by him, after being served with the before-mentioned declaration and inventory, and after the lodger shall have paid or tendered to such superior landlord, bailiff, or other person, the rent, if any, which by the last preceding section such lodger is authorised to pay, shall levy or proceed with a distress on the furniture, goods, or chattels of the lodger, such superior landlord, bailiff, or other person shall be deemed guilty of an illegal distress, and the lodger may apply to a justice of the peace for an order for the restoration to him of such goods; and such application shall be heard before a stipendiary magistrate, or before two justices in places where there is no stipendiary magistrate, such magistrate or justices shall inquire into the truth of such declaration and inventory, and shall make such order for the recovery of the goods or otherwise as to him or them may seem just, and the superior landlord shall also be liable to an action at law at the suit of the lodger, in which action the truth of the declaration and inventory may likewise be inquired into.

3. Any payment made by any lodger pursuant to the first section of this Act shall be deemed a valid payment on account of any rent due from him to his immediate landlord.

4. This Act shall not extend to Scotland.

Long Measure.—

3 barleycorns	...	make	1 inch.
12 inches	...	„	1 foot.
3 feet ...	...	„	1 yard.
$5\frac{1}{2}$ yards	...	„	1 rod, pole, or perch.
40 poles, or 220 yards		make	1 furlong.
8 furlongs, or 1760 yards, 5280 feet		„	1 mile.
3 miles ...	...	„	1 league.
6 feet ...	...	make	1 fathom.
60 geographical, or $69\frac{1}{2}$ English miles		„	1 degree at the Equator.

360 degrees, the circumference of the Globe.

(See *Square or Surface Measure.*)

Looking-glass, To Silver.—A sheet of tin-foil corresponding to the size of the plate of glass is evenly spread on a perfectly smooth and solid marble table, and every wrinkle on its surface is carefully rubbed down with a brush; a portion of mercury is then poured on, and rubbed over the foil with a clean piece of soft woollen stuff, after which two rules are applied to the edges, and mercury poured on to the depth of a crown piece, when any oxide on the surface is carefully removed, and the sheet of glass, perfectly clean and dry, is slid along over the surface of the liquid metal, so that no air, dirt, or oxide can possibly either remain or get between them. When the glass has arrived at its proper position, gentle pressure is applied, and the table sloped a little to carry off the waste mercury, after which it is covered with flannel, and loaded with heavy weights. In twenty-four hours it should be removed to a wooden table, or other convenient place, and further slanted, and this position is progressively increased during a month till it becomes perpendicular.

Low Sunday.—The first Sunday after Easter, because it is Easter Day repeated, with the church service abridged, or *lowered* in the ceremony, from the pomp of the festival the Sunday before. (See *Easter.*)

Lucky and Unlucky Days.—The belief in lucky and unlucky days has prevailed from the earliest ages. Ancient calendars designate two days in each month as unfortunate, namely, of January, the first and seventh; February, the third and fourth; March, the first and fourth; April, the tenth and eleventh; May, the third and seventh; June, the tenth and fifteenth; July, the tenth and thirteenth; August, the first and second;

September, the third and tenth; October, the third and tenth; November, the third and fifth; December, the seventh and tenth. Each of these days was devoted to some peculiar fatality. For our own part, we agree with Heraclitus, who blamed Herod for calling some days lucky and others unlucky, as not discerning that "the nature of every day is the same." And we heartily subscribe to the saying of St. Paul, who, after mentioning that "One man esteemeth one day above another, another esteemeth every day alike," adds, "Let every man be fully persuaded in his own mind."

The fourteenth day of the first month was esteemed auspicious by the Jews, because it ended their captivity in Egypt. On the other hand, the 10th of August was ill-omened, for on that day the first temple was destroyed by Nebuchadnezzar, and the second by Titus, six hundred years after.

The Romans would never undertake any business on the 13th of February (*Dies Alliensis*), which was the anniversary of the battle of Allia, when the nation was almost annihilated by the Gauls. The Carthaginians had the same superstition about the 22nd of August. Louis XI. of France, esteemed it an evil omen if any one spoke to him on business on Innocents' Day. And as to Friday in each week, that is popularly an unlucky day.

Lungs, Development of the.—Much has been said and written upon diet, eating and drinking, but we do not recollect ever noticing a remark in any writer upon breathing, or the manner of breathing. Multitudes, and especially ladies in easy circumstances, contract a vicious and destructive mode of breathing. They suppress their breathing, and contract the habit of short, quick breathing, not carrying the breath half way down the chest, and scarcely expanding the lower portions of the chest at all. Lacing the bottom of the chest also greatly increases this evil, and confirms a bad habit of breathing.

Children that move about a great deal in the open air, and in no way laced, breathe deep and full in the bottom of the chest, and every part of it. So also with most out-door labourers, and persons who take a great deal of exercise in the open air, because the lungs give us the power of action, and the more exercise we take, especially out of doors, the larger the lungs become, and the less liable to disease.

In all occupations that require standing, keep the person straight. If at table, let it be high, raised up nearly to the armpits, so as not to require you to stoop. You will find the employment much easier—not one-half so fatiguing—whilst the form of the chest and symmetry of the figure will remain perfect. The reader may have noticed that a vast many tall ladies stoop, while a great many short ones are straight. This arises, we think, from the table at which they sit or work, or occupy themselves, or study, being a medium height for a short one. This should be carefully corrected and regarded, so that each lady may occupy herself at the table to suit her, and thus prevent the possibility or necessity of stooping. It will be as well not to remain too long in a sitting position, but to rise occasionally, and thus relieve the body from its bending position. The arms could be moved about from time to time. (See *Lungs, Method of ascertaining the State of the.*)

Lungs, Method of ascertaining the State of the.—Those desirous of ascertaining the true state of their lungs are directed to draw in as much breath as they conveniently can; they are then to count as far as they are able, in a slow and audible voice, without drawing in more breath. The number of seconds they can continue counting must be carefully observed. In a consumption the number does not exceed ten, and is frequently less than six seconds; in pleurisy and pneumonia, it ranges from nine to four seconds. When the lungs are in a sound condition, the time will range as high as from twenty to thirty-five seconds. (See *Lungs, Development of the.*)

Macaroons.—Blanch and beat half a pound of sweet almonds in a mortar, with a spoonful of water, till quite fine, gradually adding the whites of eight eggs, whisked or beaten to a froth; then mix in half a pound of loaf

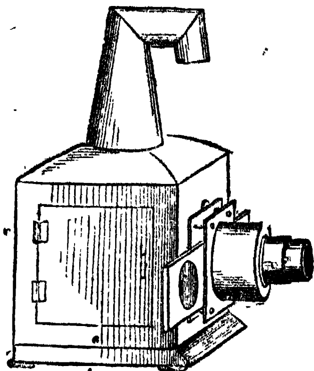
sugar, finely powdered. Spread sheets of white paper on your baking-tin, and over that the proper wafer paper; lay the paste on it, in pieces about the size of a walnut, and sift fine sugar over. Bake carefully in a moderately-hot oven, and, when cold, cut the wafer paper round. If you choose, you can lay two or three almond strips on the top of each cake as they begin to bake.

Mackerel, MARINADED.—Choose fine fish, clean them thoroughly, and cut off their heads. We are no advocates of the guillotine, but, in cookery, worthless heads should always be chopped off. Rub pepper, salt, and allspice inside. Place the fish, whole or in slices, in layers, in a baking-dish, and add a mixture, three parts vinegar and one water, enough to cover the fish. Add a few whole peppers and a blade or two of mace. Bake slowly, until the outer parts are browned. A capital breakfast or luncheon relish is thus prepared.

Mackerel, TO PRESERVE.—Mackerel may be preserved to make an excellent and well flavoured dish, to last several months. The fish should be bright, firm, and stiff when purchased, and the gills a bright red colour. Cleanse them perfectly. They may be either boiled, or lightly fried in oil. Then divide the fish into convenient slices, and remove as many of the bones as possible, together with the heads and skins. Then well rub them over with the following seasoning:—For every dozen fish use three large teaspoonfuls of salt, an ounce and a half of common black pepper, a few cloves, a little finely-powdered mace, and grated nutmeg at discretion. Cover the whole surface of the fish with the seasoning; then place the pieces in layers, pressing them gently into a stone jar, and cover the whole with good vinegar. If to be long kept, pour a little salad oil over the top.

Magic Lantern, HOW TO CONSTRUCT AND HOW TO USE A.—To Roger Bacon is attributed the discovery of the camera obscura, magic lantern, and various kinds of lenses for viewing the heavenly bodies; and so astonishing were the wonders he produced by his instruments, that his fellow monks were jealous of his fame. He was denounced to the Pope, as having dealings with his Satanic Majesty. The result was, poor Roger Bacon was thrown into prison, and almost deprived of food.

CONSTRUCTION OF THE LANTERN.—In the lantern here shown there is nothing difficult in the construction. It



is simply a tin box, painted or lacquered black. Rising from the top is a bent funnel, or chimney, which answers the double purpose of allowing the smoke and heat to escape, and preventing the light dispersing in the room, and thus interfering with the reflected figure or picture. Here, at the side of the lantern, is a door, and just withinside, in the centre, is a small oil lamp; at the back of this is a polished concave reflector; and these two articles alone are all the "works" contained in the interior of this wonder-making little box.

Now, I will close the door again, and examine what may be termed the outer works. Here, jutting out from the lower front part of the lantern, is a moveable, telescope-like tube, through which the light from within shines, and from thence is reflected on to a wall or screen. At the nozzle of the tube is simply a convex lens; and this is all, so far as this part is concerned. Now, I take off the tube, and you see a slit, or groove, through which the magic slides are run, and which holds them in position during the exhibition. Just behind the slit, and forming, in fact, an attachment to the

box itself, is a powerful hemispherical illuminating lens, which may be screwed on and off for the purpose of cleansing or varying the focus. Again I attach the telescope-tube, and now the lantern is ready for exhibiting.

But, no; not just yet. I have to fill and trim the lamp, and see that the glasses and reflector are properly cleansed.

THE LENSES AND LAMP.—Now, take these lenses (which I will unscrew) and thoroughly clean them with these soft cloths, or, better still, these chamois leathers. When done, well warm the lenses, prior to refixing them. That will be just before commencing to exhibit. This warming of the lenses is all the more necessary in winter, as the sudden exposure to the heat of the lamp in the interior may cause them to crack and fly, as you may have seen a tumbler crack when water too hot has been poured into it. During the exhibition you may observe the reflection on the screen become dim. This may be the fault of the lamp, or the lens nearest to it. Therefore, those who have the charge of this identical lens should look to it occasionally, for it will frequently happen that the water produced by the oil burning in the lantern settles as steam on the inside lens, which obscures the light. Should this be the case, carefully wipe the lens dry with a warm cloth.

The lamp comes next. First see that the lamp is perfectly cleansed from all old, thick oil; and bear in mind that, when the exhibition is over, all the oil remaining in the lamp must be poured away. This will save you much labour in after-cleaning, as, if very dirty, you will have to use potash, soda, or black soap and water, to get the lamp properly cleansed. The oil you use should be good sperm oil. Should a brighter light be required than the oil itself gives, it may be intensified by dissolving two ounces of camphor in a pint of oil. The camphor should be moistened with a little alcohol, and then pounded in a mortar. The mixture thus produced, combined with sperm oil, soon dissolves. Good colza oil is much cheaper, and gives a bright light; but whatever oil is used, it must be kept warm, and in a pure, liquid-like state, for no brilliancy can be obtained from cold, thick oils.

With respect to the wick, the cotton is to be *thoroughly dry* before inserting into the oil. This *thorough dryness* of the cotton is of the utmost importance, or you will never obtain a good and clear light. Then the wick must be carefully and evenly trimmed. There are other lights besides oil lamps used in showing the magic lantern—such as a spirit lamp, the oxycalcium light, oxyhydrogen light, &c.

The Screen.—Now come and let us examine the dimensions of the room, its conveniences for the purpose, and the nature of the walls. Had the room folding doors, I should at once decide upon a transparent screen, which should be made of thin muslin of a close nature, stretched upon a frame, and varnished. Or a simpler and less expensive screen would be to hang a fine linen sheet between the folding-doors, then tack or stretch it by means of sewn tapes all round, in order that no folds or creases should mar the effect of the picture. To give it greater transparency, it should be thoroughly wetted all over; and should it become too dry during the exhibition, it must be re-wetted by a syringe or a watering-can. With such a screen, I should fix my lantern in one room and place my audience in the other, having the strained sheet between us. The most useful and portable screen would be to mount a piece of sheeting, from six to nine feet wide, on a roller, with a good stout lath at the bottom—similar, in fact, to a window-blind. This must be carefully rolled up after using, and occasionally washed and ironed; or it may be covered with white paper, and occasionally whitewashed, which produces a bright reflecting surface.

According to the length of the room, and strength or size of the lantern, it is necessary to ascertain whether, according to the reflection shown, it would be better to fix our instrument about six or eight feet from the screen, and allow our audience to look *over our heads*, or whether we shall seat the company as close as we can to the screen; fix our instrument behind the audience, and

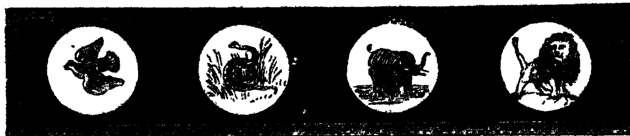
thus throw the reflection *over their heads* on to the screen. To obtain the best focus is most important, and can only be properly done by actual trial before the company assembles.

Showing the Lantern.—Here is a list of the slides (numbered as well as named), which I intend to exhibit. Now you can begin to polish them carefully with your leathers or clean dry cloths, and as they are polished, you can arrange them in their proper order, and place them conveniently to hand, so that I may pick them up in the dark. Be careful, however, to arrange them all one way, as to the top and bottom, or you willl perhaps find me showing a figure standing on its head, or a house upside down—causing a burst of derisive laughter instead of applause.

But there is one thing more. Let us finally examine our disc, now we have our proper light and our reflector and lenses duly polished, and the sheeting well tacked on the rollers. The disc of light, you perceive, is somewhat dark in the centre. We must remedy this by removing the lamp a little further from the condensing lens towards the reflector. Let us try now. Ah! the edges are now darker than the centre. We must move the lamp a *little* nearer to the lens again. That will do. See there is now a clear, bright, and even disc—neither shadow nor colour. That is as it should be.

Now for a picture. I presume they are all in proper order. Here is No. 1—Canterbury Cathedral. See, I place the *slide* in the slit, or slider, *upside down*; and to obtain the most effective picture, whether I wish to exhibit it on a large, medium, or small scale, I must increase or decrease the distance between the lantern and the screen—the nearer the screen, the smaller the picture. It is better, however, to show all views at the one uniform scale, and thus enable you to make a fixture of your lantern before commencing. With comic subjects, the case is different, as the increase or decrease of the size of the picture affords the greatest fun.

The Lecture.—It is not the mere *showing* of the pictures painted on the slides that gives importance to the magic lantern, it is the *instruction* which may be given, while the views or objects are being displayed, that demands the utmost attention. The descriptive matter should be short, given out in a voice well modulated and distinct. According to the subject little anecdotes may be effectively introduced. If you refer to the list I have given out, you will find the series of views comprise the cathedrals and abbeys of Great Britain. Here is Tintern Abbey by moonlight, Bolton Abbey, York Minster, Peterborough Cathedral, and others. Get your *Gazeteers*, and jot down, in a dozen or twenty lines, the most interesting particulars you can collect, as to the date of foundation,



dimensions, where situated, and what important events may have occurred in connection with the abbey or cathedral. These lines you will *learn by heart*, so that when you exhibit you will be able to give your lecture with ease and freedom. The delight you will give to others when they hear you thus describing the several views, would soon be known to yourself in the way of congratulations and awards, setting aside the solid instruction you will gain in your efforts to make your little lectures as pleasing as possible.

Single Stationary Slides.—Here again you will have an opportunity of displaying your knowledge of natural history, by describing the habits and peculiarities of the various animals or birds which may be shown; and here, if you have a long evening before you, many a telling anecdote could be effectively introduced. To vary the enter-

tainment, laughable, or what are termed comic slides, may be introduced, similar to the one here given.

These comic slides are generally sold in sets, and with them a little book descriptive of the figures as they pass. Little nursery stories are told in this way, such as "Who Killed Cock Robin," "Old Mother Hubbard," "Cinderella," &c. These slides average from five shillings



the set to a guinea or more, according to their number and superiority.

Lever Slides.—With these we get our first introduction to moveable subjects. By simply moving the lever at the side, upward and downward, the ship, or whatever object is shown, will appear to be in motion; and while the movement



is in progress, some one of the company, who is capable, should be invited to sing an appropriate song, as "Far, far upon the sea," "A life on the ocean wave," or some other sea song or ballad.

Revolving Figures.—These slides are exceedingly entertaining and useful. You

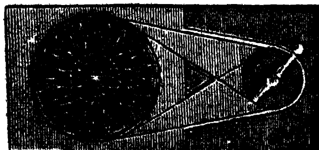




will understand their working when I tell you that in addition to the set picture painted on the slide, there is an additional glass or disc on which is painted, say, the world, which you require to revolve. This is readily done by turning a small handle connected with the moveable object by a toothed rack. The sails of a windmill, the paddle-wheel of a steamer, and other objects, may be thus made to revolve by this appliance, which is called the rack and pinion.

Slipping Slides.—These are also double slides without the rack and pinion. On one glass is a painted figure in a certain position, and on the other an adjusting figure or portion of a figure, so that by slipping the moveable glass backwards and forwards, the position is suddenly altered; for instance, a man may be standing on horseback on the fixed glass, and on the other he is standing upon his head. The sudden effects of these slipping slides are exceedingly comical and amusing.

The Chromatrope.—The Chromatrope was first suggested by W. Allen, Esq., F.R.S., in his chemical lectures, some years back, in which he exhibited a



kaleidoscope, illuminated by the oxygen light. It was then known in an elementary form for some time under the name of Chinese fireworks, and at the Adelaide Gallery as the Pyreidotrope this consisted of two discs of tin meta perforated with different designs; these openings on one disc being covered with coloured silk, and the two discs revolving in opposite directions, produced a similar

effect to the chromatrope, but were not adapted for the lantern. But the chromatrope in its present brilliant and perfected arrangement is due to Mr. Child, the well-known artist of the Polytechnic Institution. The chromatrope is represented above. It consists of two circular discs of glass painted in reverse directions, with geometrical figures in brilliant colours. When one of these discs is moved, by means of rack-work, over the other, a great variety of figures is produced, which resemble those of the kaleidoscope, but with the addition of rapid movement and constant change, in each case showing the dispersion of coloured rays from a centre, and the concentration of the coloured rays from the circumference to the centre. The chromatropes are fitted up in two styles, namely, with a rack, and with a band as in the cut represented. The last is much the best, as it admits of two movements, slow and quick, which sometimes produce very different figures.

How to Paint Magic Lantern Slides.—Having now given all the principal particulars relative to the magic



"TURN AGAIN, WHITTINGTON."

lantern, and the method of showing it, we now come to a most interesting art in connection with our subject—that of *painting on glass.* This is a study rapidly developing itself in home circles, and to which I direct your special attention.

Colour.—Many eminent painters contend that "every landscape and subject should have the three primary colours, viz., red, blue, and yellow, diffused over the picture in stated quantities—red occupying five places, yellow three, and blue eight."

From these three all tints are, or can be, produced. Red and blue make purple, which is the complementary colour to yellow; blue and yellow make green, which is complementary to red; red and yellow make orange, which is complementary to blue. These mixtures are also denominated secondary colours, and each contrasts with the *primary,* which has not been used to form the secondary.

The tertiaries—olive, russet, and citrine, are thus composed:—Olive, the blue tertiary, has one yellow, one red, and two blue; russet, the red tertiary, one blue, and two red; citrine, the yellow tertiary, one red, one blue, and two yellow; and when these colours are opposed they show up to the greatest advantage, as, for example, russet and olive and citrine and olive. All cold colours are those with blue in excess, and warm ones have red, or red and yellow. Colour dwells in or near the light parts of a picture; distance from the light causes an obscuration or blackening of it, which is called shadow. All colours, no matter how bright they may be naturally, lose that brightness when seen in the distance. Shadows of warm objects in a landscape are generally kept rather cool, and cold objects warm; and as they approach the light their edges are softened or blended into it with a grey tint. Nevertheless, all shadows, to a great extent, partake of the particular colours on which they are thrown, being modified by the illuminating power.

The best style for glass painting is undoubtedly the florid, which consists in keeping all the colours bright. The powerful artificial light which passes through the glass renders it imperative that all objects depicted on it should be exaggerated in tone. In glass slides the amateur is advised not to use greenish blues or greenish yellows.



OUTLINE VIEW OF BETHANY.

The following are a few general rules which will aid the amateur in landscape painting, not only as applied to glass, but to paper also:—

Grey Daylight.—The shadows are inclining to a brownish colour, and the lights on objects rather warm, the warm shadows helping to cool down the lights.

Moonlight effects have also warm brownish shadows, and the cool tints which prevail on the light parts of the picture appear still cooler when thus brought into contrast with the warm shadows. The light is all of a silvery grey, and the brownish shadows give great effect to it, and enable the amateur

to impart more warmth to the objects than he otherwise could do were the shadows to be kept cold.

Sunset Effects.—The lights are yellow, and objects are shadowed forth with almost positive purple. This effect is more particularly observable on an autumnal evening, when the sun is setting behind rich orange, vermilion, and purple clouds; the trees and other objects in the landscape throwing long purple shadows, which beautifully contrast with the bright tints in the sky.

Sunlight Effects.—The light here is also warm, but not so much so as in sunset, the shadows in the foreground being negative in colour, or remotely allied to purple.

Indispensables for Glass Painting in Water Colours.—Easel; outlined slides; colours—Blue (No. 1), ditto (No. 2), crimson, amber or yellow, brown, mauve, black, light green, dark green, orange, purple, scarlet; fixing varnish, pencils, dabbers, etching needles, &c.

However full of colours the box may be which the amateur purchases, he can at all times increase them by mixing; he is not, therefore, restricted to any conventional number of tubes or pans.

An artist sees more varied colours in a head or landscape than an amateur can distinguish, but these tones of colour are not all obtained by mixing; very many beautiful effects are produced in landscape painting by *glazing* and *scumbling*. In painting slides glazing alone is resorted to, the colours being necessarily all transparent. Glazing means passing a cold colour over a warm one, to tone it down, which partially alters the under tint, or in warming up a cold colour with a warm glaze, and is resorted to for deepening the shadows where greater strength may be required. Scumbling is reducing a heavy tint by going over it in a slight manner with a bare brush, containing a lighter colour than the under tint. The scumbling colour has white in its composition, which is not admissible into glass painting. The dabber produces a very similar effect to scumbling. We shall take it for granted the amateur is sufficiently stocked with all the usual requisites, and that he has made up his mind to colour one particular outline, which is composed of the usual bit of blue sky, grey clouds, distances, a building or two, figures and cattle, trees, &c.

We shall also take it for granted he intends to give his picture a grey, daylight effect. See, first of all, that the glass is perfectly clean; then make up a pale blue tint for the sky, and, turning the slide upside down, commence at the horizon, keeping the blue very pale, and increasing it in strength as he nears the conclusion.

By this means the depths of blue are more easily obtained than by beginning at the top, and weakening the colour as he goes down. The blue at the zenith is always more powerful than on any other part of the sky. The high lights may or may not be left intact; it is quite immaterial, as they can be scraped out afterwards. Now take a dabber, and, commencing at the lightest part of the tint, dab or smooth it up towards the darkest parts. The grey tint for clouds is made of red, blue, and yellow, or the purple in the box, with a little yellow, will do as well. When the clouds are cold, the blue will predominate, but when warm, then the red and yellow. Mix up the grey to pattern, if the amateur is working by one, and spread it over the clouds in a thin wash, leaving the modelling of them into form till the second and third process. We may, once for all, observe that almost every tint requires softening with the dabber, and a clean one must be used for each tint. Some painters use the finger instead, but the dabber is certainly preferable, as it gives an atmospheric appearance to distances, but it must be employed with due caution, because a too frequent use imparts a woolly effect to the picture, which destroys all texture. Trunks of trees, rocks, foregrounds, &c., must be boldly painted in, not dabbed till they become more like needlework than what they are intended to represent. If, in the progress of the painting, the tints become so dry that the dabber fails to smooth them, the amateur must breathe on the glass, to render them a little humid, and re-dab them. When the sky and clouds

have been once covered in, then paint in the distant hills—those in the extreme distance with blue, blending it into the middle distance with purple, and that again with cool green, and on nearing the foreground, make the green warmer with a little orange.

If there be any new buildings, they may be laid in with a pale orange tint; and, at the same time, the sandy roads or paths with the like. Should the buildings be old, use, instead, a pale wash of brown. Very distant buildings may be almost made out with neutral tint, except where the light falls on them, and these places must be warm. Distant trees are generally of a pale blue-green. Now lay in the large trees in a bold, masterly style, not heeding the outside and straggling leaves, but leaving them till the detail of the picture is made out. If there be any figures or cattle in the distance, the local colours must be kept in subjection. Figures and cattle near the spectator may be painted fully and brightly. Any kind of brown for cattle may be made of red, blue, and yellow, mixed to form various tints of buff, reddish or bright red-brown.

Painting the Slides.—This requires great care. For outlines and very fine work, exceedingly fine sable brushes of the very best manufacture are required, and should be selected with care, of varying size, according to the work to be executed. A finely-pointed quill, steel, or—what is the least liable to corrode—a gold pen, is very useful for outlines. A pocket-knife, with two blades, having different shaped points for scraping out; three or four needles, mounted in wood handles; a pallette of wood or porcelain; and a flexible pallette-knife, for mixing the colours; a glass slab and muller; and, if water-colours are used, a colour-slab and a few small saucers, are the chief tools required. Clean linen rag, five or six stump brushes or dabbers, formed by burning off the ends of camel-hair brushes and grinding them down on fine glass-paper, or a few leather stumps, such as are used in chalk drawing, should also be provided. These are all useful for toning or softening down skies, &c.

A most convenient support or easel for the glass to be painted is, a sheet of glass in a wood frame, mounted with clamps and adjustments, so that it can be placed at any angle and any convenient height for the artist. The glass to be painted is placed upon the clear glass in the frame, and upon the base board is spread a sheet of pure white paper, to reflect up the light through the painting. This enables the artist to reduce large drawings with tolerable accuracy on to the small glass, without making a tracing on paper. By placing various tinted papers beneath the painting frame, the artist may study the effect of various colours upon his painting with great advantage.

Mahogany, Artificial.—Those who wish to give to common woods of close grain the appearance of mahogany in texture, density, and polish, can do so by following out our instructions:—The surface is planed smooth, and the wood is then rubbed with a solution of nitrous acid; one ounce of dragon's blood is dissolved in nearly a pint of spirits of wine; this, and one-third of an ounce of carbonate of soda, are then to be mixed together and filtered, and the liquid in this thin state is to be laid on with a soft brush. This process is to be repeated, and in a short interval afterwards the wood possesses the external appearance of mahogany. When the polish diminishes in brilliancy it may be restored by the use of a little cold-drawn linseed oil.

Mahogany Furniture.—It was only in 1720 that mahogany was first employed in England for cabinet furniture. Its origin is thus related:—Dr. Gibbons, an eminent physician, having had some planks of this wood given to him by his brother, a West India captain, who had brought them in his vessel as ballast, wished to use them for a house he was building, but the carpenters complained that the wood was too hard; it was therefore laid aside as useless. Soon after Mrs. Gibbons wanted a candle-box, and the doctor called in his cabinet-maker to make him one of this wood, then lying in his garden. He also declared that it was too hard. The

doctor said he must get stronger tools. The candle-box was completed and approved, insomuch that the doctor insisted upon having a bureau made of the same wood, and when finished, the fine colour, the polish, &c., were so striking that he invited his friends to come and see it. Among them was the Duchess of Buckingham, who was so pleased that she had a bureau from the same wood, which speedily became fashionable among the higher classes, and has ever since remained so.

Man, Life of.—See *Life*.

Manna.—Some persons have attempted to trace a connection between the food miraculously rained down from heaven for the sustenance of the Israelites in the wilderness and the substance now known as "manna." Of the composition of the former we know nothing, while we do know that the latter cannot be used as food. The manna now used is obtained chiefly from Sicily and Calabria, and is the concrete juice of several species of ash of the genera *ornus* and *fraxinus*. The juice exudes in the summer months, either spontaneously or through incisions made for that purpose in the bark, and is collected in leaves placed as cups to receive it; or it forms incrustations upon twigs, straws, and leaves placed under the trees. The best is of a whitish or light yellow colour, in flakes and tears. It possesses a sweet, somewhat nauseous taste, and is soluble in water and alcohol. It consists of a crystalizable, sweet principle, called "mannite," which sometimes amounts to seventy-five per cent. of true sugar, and of a yellow, nauseous matter, which gives it its value as a purgative medicine. A substance called manna is obtained by the Bedouin Arabs in the form of an exudation from a plant which grows in the country. After collecting it, they boil and strain it through a cloth. It is then put away in leathern bags, and used like honey, with bread. The name is probably derived from *mano*, a gift, which was applied to the food of the Israelites; but it is not likely that there is any further connection between the two substances.

Maps, To Prepare Wash Colours for.—*Yellow.*—Dissolve gamboge in water, or French berries steeped in water, strain the liquor, and add gum arabic. *Red.*—Steep braxil in vinegar, with alum; or dissolve litmus in water, and add spirits of wine; or steep cochineal in water; strain, and add gum. *Blue.*—Dilute Saxon blue with water; or to the solution of litmus add distilled vinegar. *Green.*—Dissolve verdigris in distilled water, and add gum; or dissolve sap-green in water, and add gum. Litmus is rendered green by adding alkali to its solution.

Marinaded Mackerel.—See *Mackerel*.

Mariner's Compass.—The compass by which a ship is guided when out of sight of land, is an extraordinary and providential adaptation of a natural law, which orders that a magnet shall always point *nearly* due north. In various localities on the face of the globe it points a certain number of degrees to the east or west of north; but the precise "variations" are marked down on all the charts. The needle is suspended with great delicacy, attached to a card marked with the 32 points into which the horizon is divided; and the telling off these glibly is called "boxing the compass." The needle and card are contained in a box glazed on the top, and placed within view of the steersman in a receptable called the "binnacle," lighted at night by a lamp. In front of the compass is a black line, which the steersman is directed to keep exactly opposite the point of the compass by which he is ordered to steer, the master making his calculations for variation, and then giving the course which the steersman is to keep exactly in accordance with the compass.

Marjoram.—The sweet or knotted marjoram being rather a tender annual, if wanted early the seed should be sown on a slight heat, towards the end of March; if otherwise, on a warm border of light, rich earth, about the middle of April; the plants to be afterwards thinned to the distance of a few inches, and left to grow for use. Those raised on heat (after being hardened to the weather) should be planted out, either in a patch in the open ground or in pots,

When planting in pots, use the size called 32, and put two or three plants in each.

The common or pot marjoram, being a perennial, is easily propagated by parting the roots into small tufts, in the early part of spring, and planting them in three or four feet beds, in any light dry soil, about a foot apart; or they can be made an edging to borders; and then it is requisite that they should be planted at the distance of six inches instead of one foot.

If the pot-marjoram is wanted for drying, it should be cut, when in full bloom, as at that time all aromatic herbs possess their greatest strength and virtue. When cut, it should be laid in a shady place to dry; and, when the leaves feel crisp, put up in paper bags for use, and in a place where it will be clear of dust. It is chiefly used as a seasoning for soups.

GENERAL MARKETING TABLE,

SHOWING THE AMOUNT OF ANY NUMBER OF POUNDS, YARDS, ETC., AT ANY PRICE, FROM ONE FARTHING UPWARDS.

Lbs., yds., &c.	¼d.		½d.		¾d.		1d.		2d.		3d.		4d		5d.		6d.			7d.			8d.			9d.			10d.			11d.		
	s	d	s	d	s	d	s	d	s	d	s	d	s	d	s	d	£	s	d	£	s	d	£	s	d	£	s	d	£	s	d	£	s	d
2	0	0½	0	1	0	1½	0	2	0	4	0	6	0	8	0	10	0	1	0	0	1	2	0	1	4	0	1	6	0	1	8	0	1	10
3	0	0¾	0	1½	0	2¼	0	3	0	6	0	9	1	0	1	3	0	1	6	0	1	9	0	2	0	0	2	3	0	2	6	0	2	9
4	0	1	0	2	0	3	0	4	0	8	1	0	1	4	1	8	0	2	0	0	2	4	0	2	8	0	3	0	0	3	4	0	3	8
5	0	1¼	0	2½	0	3¾	0	5	0	10	1	3	1	8	2	1	0	2	6	0	2	11	0	3	4	0	3	9	0	4	2	0	4	7
6	0	1½	0	3	0	4½	0	6	1	0	1	6	2	0	2	6	0	3	0	0	3	6	0	4	0	0	4	6	0	5	0	0	5	6
7	0	1¾	0	3½	0	5¼	0	7	1	2	1	9	2	4	2	11	0	3	6	0	4	1	0	4	8	0	5	3	0	5	10	0	6	5
8	0	2	0	4	0	6	0	8	1	4	2	0	2	8	3	4	0	4	0	0	4	8	0	5	4	0	6	0	0	6	8	0	7	4
9	0	2¼	0	4½	0	6¾	0	9	1	6	2	3	3	0	3	9	0	4	6	0	5	3	0	6	0	0	6	9	0	7	6	0	8	3
10	0	2½	0	5	0	7½	0	10	1	8	2	6	3	4	4	2	0	5	0	0	5	10	0	6	8	0	7	6	0	8	4	0	9	2
11	0	2¾	0	5½	0	8¼	0	11	1	10	2	9	3	8	4	7	0	5	6	0	6	5	0	7	4	0	8	3	0	9	2	0	10	1
12	0	3	0	6	0	9	1	0	2	0	3	0	4	0	5	0	0	6	0	0	7	0	0	8	0	0	9	0	0	10	0	0	11	0
13	0	3¼	0	6½	0	9¾	1	1	2	2	3	3	4	4	5	5	0	6	6	0	7	7	0	8	8	0	9	9	0	10	10	0	11	11
14	0	3½	0	7	0	10½	1	2	2	4	3	6	4	8	5	10	0	7	0	0	8	2	0	9	4	0	10	6	0	11	8	0	12	10
15	0	3¾	0	7½	0	11¼	1	3	2	6	3	9	5	0	6	3	0	7	6	0	8	9	0	10	0	0	11	3	0	12	6	0	13	9
16	0	4	0	8	1	0	1	4	2	8	4	0	5	4	6	8	0	8	0	0	9	4	0	10	8	0	12	0	0	13	4	0	14	8
17	0	4¼	0	8½	1	0¾	1	5	2	10	4	3	5	8	7	1	0	8	6	0	9	11	0	11	4	0	12	9	0	14	2	0	15	7
18	0	4½	0	9	1	1½	1	6	3	0	4	6	6	0	7	6	0	9	0	0	10	6	0	12	0	0	13	6	0	15	0	0	16	6
19	0	4¾	0	9½	1	2¼	1	7	3	2	4	9	6	4	7	11	0	9	6	0	11	1	0	12	8	0	14	3	0	15	10	0	17	5
20	0	5	0	10	1	3	1	8	3	4	5	0	6	8	8	4	0	10	0	0	11	8	0	13	4	0	15	0	0	16	8	0	18	4
21	0	5¼	0	10½	1	3¾	1	9	3	6	5	3	7	0	8	9	0	10	6	0	12	3	0	14	0	0	15	9	0	17	6	0	19	3
22	0	5½	0	11	1	4½	1	10	3	8	5	6	7	4	9	2	0	11	0	0	12	10	0	14	8	0	16	6	0	18	4	1	0	2
23	0	5¾	0	11½	1	5¼	1	11	3	10	5	9	7	8	9	7	0	11	6	0	13	5	0	15	4	0	17	3	0	19	2	1	1	1
24	0	6	1	0	1	6	2	0	4	0	6	0	8	0	10	0	0	12	0	0	14	0	0	16	0	0	18	0	1	0	0	1	2	0
25	0	6¼	1	0½	1	6¾	2	1	4	2	6	3	[illegible]	4	10	5	0	12	6	0	14	7	0	16	8	0	1[illegible]	[illegible]	[illegible]	0	10	1	2	11
26	0	6½	1	1	1	7½	2	2	4	4	6	6	8	8	10	10	0	13	0	0	15	2	0	17	[illegible]	[illegible]	19	6	1	1	8	1	3	10
27	0	6¾	1	1½	1	8¼	2	3	4	6	6	9	9	0	11	3	0	13	6	0	15	9	0	18	0	1	0	3	1	2	6	1	4	9
28	0	7	1	2	1	9	2	4	4	8	7	0	9	4	11	8	0	14	0	0	16	4	0	18	8	1	1	0	1	3	4	1	5	8
29	0	7¼	1	2½	1	9¾	2	5	4	10	7	3	9	8	12	1	0	14	6	0	16	11	0	19	4	1	1	9	1	4	2	1	6	7
30	0	7½	1	3	1	10½	2	6	5	0	7	6	10	0	12	6	0	15	0	0	17	6	1	0	0	1	2	6	1	5	0	1	7	6
31	0	7¾	1	3½	1	11¼	2	7	5	2	7	9	10	4	12	11	0	15	6	0	18	1	1	0	8	1	3	3	1	5	10	1	8	5
32	0	8	1	4	2	0	2	8	5	4	8	0	10	8	13	4	0	16	0	0	18	8	1	1	4	1	4	0	1	6	8	1	9	4
33	0	8¼	1	4½	2	0¾	2	9	5	6	8	3	11	0	13	9	0	16	6	0	19	3	1	2	0	1	4	9	1	7	6	1	10	3
34	0	8½	1	5	2	1½	2	10	5	8	8	6	11	4	14	2	0	17	0	0	19	10	1	2	8	1	5	6	1	8	4	1	11	2
35	0	8¾	1	5½	2	2¼	2	11	5	10	8	9	11	8	14	7	0	17	6	1	0	5	1	3	4	1	6	3	1	9	2	1	12	1
36	0	9	1	6	2	3	3	0	6	0	9	0	12	0	15	0	0	18	0	1	1	0	1	4	0	1	7	0	1	10	0	1	13	0
37	0	9¼	1	6½	2	3¾	3	1	6	2	9	3	12	4	15	5	0	18	6	1	1	7	1	4	8	1	7	9	1	10	10	1	13	11
38	0	9½	1	7	2	4½	3	2	6	4	9	6	12	8	15	10	0	19	0	1	2	2	1	5	4	1	8	6	1	11	8	1	14	10
39	0	9¾	1	7½	2	5¼	3	3	6	6	9	9	13	0	16	3	0	19	6	1	2	9	1	6	0	1	9	3	1	12	6	1	15	9
40	0	10	1	8	2	6	3	4	6	8	10	0	13	4	16	8	1	0	0	1	3	4	1	6	8	1	10	0	1	13	4	1	16	8

Marketing, General Rules for.—Marketing is a very important part of a housekeeper's duty, and requires sound judgment to perform it in that way which will conduce most to the profit and comfort of home. Have a care to consult family "likes" and "dislikes;" that food for which the palate craves generally proves most nourishing to the consumer, and is a great security against waste. Buy, as a general rule, food that is in season, especially fish, fruit, and vegetables. In your purchases also have an eye to *variety* of food; the stomach is kept in healthier condition by change of diet. Every day a different dinner should be provided. Avoid cheapening from shop to shop (see *Bargain-*

Making). Be assured that *essentially* there is little or no difference in the prices of the necessaries of life—it is all a *seeming* and a delusion. If the *general* price of bread is 7d., depend upon it the baker who sells it for 6d. or 6½d. has other and pernicious means which do not meet his customer's eye, to make even more profit than he who is selling at 7d. Buy all articles that will keep in as large a quantity as possible; by so doing you will save much time in errand running, and no doubt purchase at a cheaper rate. When you or your servant return from marketing, let everything be weighed (see *Weights and Scales*), the price calculated by the preceding table, and entered in your *account book*. (See *Accounts*.)

In purchasing perishable goods care should be taken to get everything as *fresh* and *new* as possible. This is absolutely necessary in the case of vegetables, fruit, eggs, butter, and fish generally, as these cannot be used in too fresh a condition; but, as meat requires to be kept some time, it may, when the butcher's word can be trusted as to the day on which it was killed, be purchased ready for cooking. Indeed this must often be done when a small supply of cut meat, such as steaks or chops, is required. As, however, it is the butcher's interest to sell off his meat while it is fresh, in order to avoid the loss arising from its spoiling on his hands, he will seldom have any prime pieces which have been kept long enough for immediate use, so that it is much safer, as a general rule, to ask for it fresh, and keep it at home.

Where it is possible, the housewife should always market herself, and pay ready money for everything she purchases. This is the only way in which she can be sure of getting the best goods at the lowest price.

Marking Ink.—See *Ink, Marking*.

Marmalade, BLACK CURRANT.—This preparation, besides being delectable to the palate, is good for relieving a cough. Take the currants when they are fully ripe, strip them from the stalks, bruise them a little in the preserving-pan, and stew them gently, keeping them turned until they are tender, which they will generally be in from ten to fifteen minutes. Pour off about three parts of the juice, which will make excellent jelly, and rub the remainder with the currants through a sieve. Weigh the pulp, boil it rapidly for a quarter of an hour, or for twenty minutes, if there should be a large quantity of it; then for each pound stir into it, until dissolved, nine ounces of white sugar rolled or pounded fine; boil the marmalade quickly for ten minutes, stirring it often, and pour it into small pans. If well made, it will cut in firm slices. (See *Adulterations*.)

Marquis.—In degree of nobility a marquis ranks next to an earl. His office formerly was to guard the frontiers and limits of the kingdom, which were called the marches, from the Teutonic word *marche*, a limit; as, in particular, were the marches of Wales and Scotland, before those countries were annexed to Britain. The persons who guarded the frontiers were called lords marches, or marquises. Their authority was abolished by statute in the time of Henry VIII. as no longer necessary. Ruins on the border lands still attest the power and extent of those strongholds where lords of the marches presided in nearly regal splendour. Such is Ludlow Castle, on the borders of Wales, where Milton wrote his "Comus," and among whose fields and woods he laid the scene of that inimitable poem.

The first English marquisate was conferred by Richard II. upon Robert de Vere, afterwards created Duke of Ireland.

By the Crown he is addressed—"Our Right Trusty and Entirely Beloved cousin."

His sons are right honourables and lords; his daughters right honourables and ladies.

The style of a marquis is "Right Honourable." If addressed by letter, the direction should be—"To the Most Honourable the Marquis of ——"

Marriage, ADVICE ON.—"Women" says Lord Lytton, "regard men just as they buy books—they never care about what is in them, but

how they are bound and lettered." Alas! the charge in too many instances is true. A row of gilt buttons or a tinselled coat is not always the covering of a warrior—no more are rags always the covering of a fool.

Marriage is not a matter of convenience, nor is destiny a trade; marriage should be a blessing, for when it ceases to be such it becomes a curse.

Show us a man that spends two hours a day over his moustache, four hours with his clothes on before the mirror, and the remainder of the day in twisting his hair into innumerable shapes, agreeable to fashion, and entertaining you with witless remarks upon things he knows nothing about; and we will show you a man who does not merit the love of any woman.

Girls, for your own sakes do not marry such creatures; they cannot command your respect, and where there is no respect love cannot long dwell. When will people learn that though human love is not the growth of a human will, it is under its control?

Marry a man with a warm heart and a clear brain, but do not make fools of yourselves by marrying fools. With you, girls, rests the moral education of the world.

If you are in love with a sensible man don't be ashamed to say so. True, pure, womanly love for a worthy man, no girl should be ashamed of—rather glory that in this day of shallow hearts you have a heart that can love.

If you wish to marry when a certain man asks the question, say yes; none of this—"It takes time for consideration," and like expressions. If a girl is ashamed to show that she returns a wooer's love, her love is not worth possessing.

Dean Swift sagely remarks—"The reason why so few marriages are happy, is because young ladies spend their time in making nets, not in making cages." The purest and holiest relation in life is that of marriage, which ought never to be regarded as a mere civil contract, entered into from mere worldly ends, but as an essential union of two minds, by which each gains a new power and acquires new capacities for usefulness. "A well-assorted marriage is the epitome of eternal rewards."

"Now all ye ladies of fair Scotland,
And ladies of England that happy would prove
Marry never for houses, nor never for land,
Nor marry for nothing but only love."

May Hamilton beautifully says:—"Oh! surely marriage is a great and sacred responsibility. It is a barque in which two souls venture out on life's stormy sea, with no aid but their own to help them; the well-doing of their frail vessel must in future solely rest upon themselves; no one can take part either to mar or make their bliss or misery. From her husband alone must henceforth flow all the happiness that the wife is destined to know; he is the only being she must care to please; all other men are now to be to her but shadows glancing on the wall. And he—what is his share in the compact? how does he fulfil his promise—redeem his pledge? For does he not swear to guard and cherish, and look leniently on the faults of the gentle girl he takes to his heart? and in return for all her duty and sweet obedience, be true to her in sickness and health, in wealth and in poverty, for ever and for ever?

"Though fools spurn Hymen's gentle powers,
We who improve his golden hours
By sweet experience know
That marriage, rightly understood,
Gives to the tender and the good,
A paradise below."

Marriage Licences. — See *Ecclesiastical Licences.*

Married Women's Property Act.—Whereas it is desirable to amend the law of property and contract with respect to married women: Be it enacted by the Queen's most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows:—

EARNINGS OF MARRIED WOMEN TO BE DEEMED THEIR OWN PROPERTY.

1. The wages and earnings of any married woman acquired or gained by her after the passing of this Act, in any employment, occupation, or trade in which she is engaged, or which she carries on separately from her husband, and also any money or property so acquired by her

through the exercise of any literary, artistic, or scientific skill; and all investments of such wages, earnings, money, or property shall be deemed and taken to be property held and settled to her separate use, independent of her husband.

DEPOSITS IN SAVINGS BANKS BY A MARRIED WOMAN TO BE DEEMED HER SEPARATE PROPERTY.

2. Deposits in savings banks in the name of a married woman, or in the name of a woman who may marry after such deposit or grant, shall be deemed to be the separate property of such woman, and the same shall be accounted for and paid to her as if she were an unmarried woman; provided that if any such deposit is made by a married woman by means of moneys of her husband without his consent, the Court may upon an application under section nine of this Act order such deposit, or any part, to be paid to the husband.

AS TO A MARRIED WOMAN'S PROPERTY IN THE FUNDS.

3. Any married woman, or any woman about to be married, may apply to the Governor and Company of the Bank of England, or to the Governor and Company of the Bank of Ireland, by a form to be provided by the governor of each of the said banks and company for that purpose, that any sum forming part of the public stocks and funds, and not being less than twenty pounds, to which the woman so applying is entitled, or which she is about to acquire, may be transferred to or made to stand in the books of the governor and company to whom such application is made in the name or intended name of the woman as a married woman entitled to her separate use, and on such sum being entered in the books of the said governor and company accordingly the same shall be deemed to be the separate property of such woman, and shall be transferred and the dividends paid as if she were an unmarried woman; provided that if any such investment in the funds is made by a married woman by means of moneys of her husband without his consent, the Court may, upon an application under section nine of this Act, order such investment and the dividends thereof, or any part thereof, to be transferred and paid to the husband.

AS TO A MARRIED WOMAN'S PROPERTY IN A JOINT STOCK COMPANY.

4. Any married woman, or any woman about to be married, may apply in writing to the managers of any incorporated or joint stock company that any fully paid-up shares, or any debenture or debenture stock, or any stock of such company, to the holding of which no liability is attached, and to which the woman so applying is entitled, may be registered in the books of the said company in the name or intended name of the woman as a married woman entitled to her separate use, and the same upon being so registered shall be deemed to be the separate property of such woman, and shall be transferred and the dividends and profits paid as if she were an unmarried woman; provided that if any such investment as last mentioned is made by a married woman by means of moneys of her husband without his consent, the Court may, upon an application under section nine of this Act, order such investment and the dividends and profits thereon, or any part thereof, to be transferred and paid to the husband.

AS TO A MARRIED WOMAN'S PROPERTY IN A SOCIETY.

5. Any married woman, or any woman about to be married, may apply in writing to the committee of management of any industrial and provident society, or to the trustees of any friendly society, benefit building society, or loan society, duly registered, certified, or enrolled under the Acts relating to such societies respectively, that any share, benefit, debenture, right, or claim whatsoever in, to, or upon the funds of such society, to the holding of which share, benefit, or debenture no liability is attached, and to which the woman so applying is entitled, may be entered in the books of the society in the name or intended name of the woman as a married woman entitled to her separate use, and it shall be the duty of such committee or trustees to cause the same to be so entered, and thereupon such share, benefit, debenture, right, or claim shall be deemed to be the separate property of

such woman, and shall be transferable and payable with all dividends and profits thereon as if she were an unmarried woman; provided that if any such share, benefit, debenture, right, or claim has been obtained by a married woman by means of moneys of her husband without his consent, the Court may, upon an application under section nine of this Act, order the same and the dividends and profits thereon, or any part thereof, to be transferred and paid to the husband.

DEPOSIT OF MONEYS IN FRAUD OF CREDITORS INVALID.

6. Nothing hereinbefore contained in reference to moneys deposited in or annuities granted by savings banks, or moneys invested in the funds or in shares or stock of any company shall, as against creditors of the husband, give validity to any deposit or investment of moneys of the husband made in fraud of such creditors, and any moneys so deposited or invested may be followed as if this Act had not passed.

PERSONAL PROPERTY NOT EXCEEDING £200 COMING TO A MARRIED WOMAN TO BE HER OWN.

7. When any woman married after the passing of this Act shall during her marriage become entitled to any personal property as next of kin, or one of the next of kin, of an intestate, or to any sum of money not exceeding two hundred pounds under any deed or will, such property shall, subject and without prejudice to the trusts of any settlement affecting the same, belong to the woman for her separate use, and her receipts alone shall be a good discharge for the same.

FREEHOLD PROPERTY COMING TO A MARRIED WOMAN, RENTS AND PROFITS ONLY TO BE HER OWN.

8. Where any freehold, copyhold, or customaryhold property shall descend upon any woman married as heiress or co-heiress of an intestate, the rents and profits of such property shall, subject and without prejudice to the trusts of any settlement affecting the same, belong to such woman for her separate use.

HOW QUESTIONS AS TO OWNERSHIP OF PROPERTY ARE TO BE SETTLED.

9. In any question between husband and wife as to property declared by this Act to be the separate property of the wife, either party may apply by summons or motion in a summary way either to the Court of Chancery in England or Ireland, according as such property is in England or Ireland (irrespective of the value of the property), the judge of the County Court of the district in which either party resides, and thereupon the judge may make such order, direct such inquiry, and award such costs as he shall think fit.

MARRIED WOMEN MAY EFFECT POLICY OF INSURANCE.

10. A married woman may effect a policy of insurance upon her own life or the life of her husband for her separate use, and the same and all benefit thereof, if expressed on the face of it to be so effected, shall enure accordingly, and the contract in such policy shall be as valid as if made with an unmarried woman.

AS TO INSURANCE OF A HUSBAND FOR BENEFIT OF HIS WIFE.

A policy of insurance effected by any married man on his own life, and expressed upon the face of it to be for the benefit of his wife, or of his wife and children, or any of them, shall enure and be deemed a trust for the benefit of his wife for her separate use, and of his children, or any of them, according to the interest so expressed, and shall not, so long as any object of the trust remains, be subject to the control of the husband or to his creditors, or form part of his estate. When the sum secured by the policy becomes payable, or at any time previously, a trustee thereof may be appointed by the Court of Chancery in England or in Ireland, or in England by the judge of the County Court of the district, or in Ireland by the chairman of the Civil Bill Court of the division of the county in which the insurance office is situated. If it shall be proved that the policy was effected and premiums paid by the husband with intent to defraud his creditors, they shall be entitled to receive out of the sum secured an amount equal to the premiums so paid.

MARRIED WOMEN MAY MAINTAIN AN ACTION.

11. A married woman may maintain

an action in her own name for the recovery of any wages, earnings, money, and property by this Act declared to be her separate property, or of any property belonging to her before marriage, and which her husband shall, by writing under his hand, have agreed with her shall belong to her after marriage as her separate property, and she shall have in her own name the same remedies, both civil and criminal, against all persons whomsoever for the protection and security of such wages, earnings, &c.

HUSBAND NOT TO BE LIABLE ON HIS WIFE'S CONTRACTS BEFORE MARRIAGE.

12. A husband shall not, by reason of any marriage which shall take place after this Act has come into operation, be liable for the debts of his wife contracted before marriage, but his wife shall be liable to be sued for, and any property belonging to her for her separate use shall be liable to satisfy such debts as if she had continued unmarried.

MARRIED WOMEN TO BE LIABLE TO THE PARISH FOR THE MAINTENANCE OF THEIR HUSBANDS.

13. Where in England the husband of any woman having separate property becomes chargeable to any union or parish, the justices having jurisdiction in such union or parish may, in petty sessions assembled, upon application of the guardians of the poor, issue a summons against the wife, and make and enforce such order against her for the maintenance of her husband.

MARRIED WOMEN TO BE LIABLE TO THE PARISH FOR THE MAINTENANCE OF THEIR CHILDREN.

14. A married woman having separate property shall be subject to all such liability for the maintenance of her children as a widow is now by law subject to for the maintenance of her children: provided always that nothing in this Act shall relieve her husband from any liability at present imposed upon him by law to maintain her children.

This Act does not extend to Scotland.

Mauve and Magenta.—See *Colours in Dress.*

Meals, Number and Periods of Taking.—Dr. Coombe, the very highest authority on the preservation of health, observes that, "The number and periods of our meals should be in proportion to the real wants of the system, as modified by age, sex, health, and manner of life, and as indicated by the true returns of appetite." It is well to have fixed periods for our meals, which should not exceed three for grown-up people, although four or five is generally the number. Children require feeding more frequently than adults. The best time for breakfast is as soon after rising and dressing as possible, and the meal should consist of a light diet and coffee. It is improper for delicate persons to exercise either body or mind much before breakfast; it produces exhaustion and langour.

Luncheon is not a necessary meal, except when the period between breakfast and dinner is too long.

Dinner should be taken about one or two o'clock; and after partaking of the most digestible food, it is advisable to rest, if possible, for a short time, and then take a little exertion.

Tea should consist of a light nutritive diet, with a moderate allowance of tea or coffee, and to be partaken of about six o'clock in the evening.

Suppers are unnecessary to persons that dine late, and at any time injurious except to those who take much exercise.

Meats.—See *Cookery.*

Medical Proportionate Doses.—If a dose be one, or one drachm, for a person 21 years old, the proportionate doses according to age will be:

Under	1 year	...	$\frac{1}{12}$	or	5	grs.
,,	2 years	...	$\frac{1}{8}$	,,	7½	grs.
,,	3 ,,	...	$\frac{1}{6}$	,,	10	grs.
,,	4 ,,	...	$\frac{1}{4}$	,,	15	grs.
,,	7 ,,	...	$\frac{1}{3}$	,,	1	scru.
,,	14 ,,	...	$\frac{1}{2}$	,,	1½	scru.
,,	20 ,,	...	$\frac{2}{3}$	,,	2	scru.
Above	21 ,,	...	1	,,	1	dra.
,,	65 ,,	...	the inverse ratio.			

Women require smaller doses than men.

Medicines, To Destroy the Taste of.—Dr. Polli recommends a means, founded on the physiological fact that a strong impression on the nerves (whether of vision, hearing, or taste) renders that which follows less percep-

tible. Instead of applying to the mouth, therefore, agreeable substances after swallowing nauseous medicines, we should prepare it before, in order that the taste of the medicine may not be perceived. Aromatic substances, chewed just before, or orange or lemon peel, effectually prevent castor oil from being tasted. In preparing the mouth for bitters, liquorice is the only sweet that should be used, the others creating a peculiarly disagreeable compound taste.

Memory, The Art of Cultivating.—Cultivate this glorious faculty by storing and exercising it with trains of imagery. Accustom yourselves to look at any natural object, and then consider how many facts and thoughts may be associated with it; how much of poetic imagery and refined combinations. Follow out this idea, and you will find that imagination, which is too often in youth permitted to build up castles in the air, tenantless as they are unprofitable, will become, if duly exercised, a source of much enjoyment. We were led into this train of thought while walking in a beautiful country, and seeing before us a glorious rainbow, over-arching the valley which lay in front. And not more quickly than its appearance, came to our remembrance an admirable passage in the "Art of Poetic Painting," wherein the author suggests the great mental advantage of exercising the mind to all subjects, by considering—

What use can be made of them.
What remarks they will illustrate.
What representations they will serve.
What comparison they will furnish.

And while thus thinking, we remembered that the ingenious author has instanced the rainbow as affording a variety of illustrations, and capable, in the imagery which it suggests, of numerous combinations. Thus:—

The Hues of the Rainbow

Tinted the green and flowery banks of the stream.
Tinged the white blossoms of the apple orchards.
Shed a beauteous radiance on the grass.
Veiled the waning moon and the evening star.
Over-arched the mist of the waterfall.
Reminded the looker-on of peace opposed to turbulence;
And illustrated the moral, that even the most beautiful things of earth must pass away.

Mercury.—See *Alteratives*.

Michaelmas Day.—This day, as most people know who have rent to pay, is one of the quarter days, and falls on the 29th September. It is a great festival of the Romish and English churches. St. Michael is singled out for particular mention as being the chief of angels. Wheatley says—"The feast of St. Michael and All Angels is observed that the people may know what benefits are derived from the ministry of angels." The popular custom of having a goose for dinner on this day thus originated—Queen Elizabeth is said to have been eating her Michaelmas goose when she received intelligence of the defeat of the Spanish Armada. There have been other reasons assigned for this custom, but it seems to have arisen simply from the goose being at this time in finest condition for the table.

Midsummer Day.—This falls on the 24th of June, and is sometimes known as St. John's Day, being the nativity of St. John the Baptist. It is a time of high observance in Catholic countries. It was believed by the superstitious that on the eve [illegible], by fasting and pulling certain herbs, it was possible to obtain an insight into futurity.

Mile (The) in Different Countries.—

English Mile	=	1,760 yds.
Knot or Nautical Mile ...	=	2,025 „
Dutch Mile	=	8,101 „
German Mile	=	5,866 „
Spanish „	=	5,028 „
Russian „	=	1,100 „

Milk, To Preserve.—Fifteen grains of the carbonate of magnesia in a quart of milk will not give it any very unpleasant taste, and will certainly prevent its acidulation and curdling. Carbonate of soda will have a similar effect, and it is thought by some to improve the tendency of the cream to separate from the milk. Another plan is to place the new milk in bottles, and insert them

in a pan on the fire, immersed in cold water, until the water boils. The air in the bottles thus becomes rarefied, and if corked up hot, will be kept for a considerable time in a state of comparative freshness; to be used immediately the bottles are opened. The addition of a few grains of carbonate of soda will, of course, much improve its keeping qualities. It should also, after this, be kept as cool as possible. (See *Adulterations.*)

Mint.—This herb is best propagated by cuttings, or by dividing the roots of an old plant. February is the proper season for this; but it may be done at any time in cloudy weather by shading and watering. Those who have conservatories or frames should keep a root or two of mint in pots, as it is in demand for lamb very early in the year, and before it puts forth its young leaves in the open ground. Mint will grow in any sort of light soil or situation; but a warm spot, if attainable, will bring it forward earlier for use. A bed six feet in length will produce a large quantity of this herb. If mint be propagated to be kept for *drying*, the plants must be advanced in growth till they are nearly in full flower, when they are to be cut, and the stalks laid out thinly in some dry shady place, where they may dry leisurely. When found of sufficient crispness, they may be either tied up in bunches or put in paper bags (this is the better method to keep them from dust) and laid in some dry place till wanted.

Money, How it is Coined.—There appears to exist a considerable amount of misconception as to the manner in which our coin is made. Many persons imagine, for instance, that coins are, as it were, soldered together in two halves, and that the head is struck at one press and the tail at another; but this is quite a mistake, the impression being given to a plain disc of metal, or "blank," and the edge milling at a single blow.

Ingots of gold or silver are first thrown into melting-pots and reduced to fluidity. After this they are cast into bars of various sizes, proportionate to the kind of coins to be produced from them. These bars are next pressed forward to rolling mills of great power (we speak here of the English mint), and laminated, or drawn out by pressure to a state of attenuity marvellously different to the rigid form in which they left the moulds. The bars, in fact, are now converted into ribbons, flexible as the wand of Harlequin; and these, being beautifully adjusted in thickness for the pieces to be obtained from them, are passed to a set of punching presses, where they are perforated—honey-combed—from end to end.

The discs of metal thus obtained are blank sovereigns, very much resembling shankless brass buttons, or blank sixpences, as it may happen to be sovereign or sixpenny "ribbons" which are being dealt with; and are then carried forward to the weighing machines. These select the sheep from the goats—the light and heavy from the medium or standard blanks.

The accepted candidates for coinage are now taken to the marking room, whilst the rejected are doomed to the purgatory of the crucible again. The marking machines raise partially the protecting edges of the future coins, which are then again submitted to a fiery ordeal in the shape of an annealing oven. This operation softens and tempers them. They are made—as young ladies are said to be—susceptible to impressions, and are then pickled, or blanched, in a weak solution of sulphuric acid. This gives them a bright surface, and removes all impurities.

Drying is the next process, and this is performed over a hot iron plate—*à la* muffin and crumpet.

The blanks are now ready to receive the "image and superscription" of the Queen—God bless her! This finishing touch is given in the press room.

The pieces are now weighed out to a number of boys, who attend and feed the presses with them. On one side of the press blanks are put into tubes, and on the other they are thrown out coins. They get, however, a mighty hard squeeze in the "middle passage," between two beautifully-engraved head and reverse dies, and are at the same time prevented from expanding unduly by means of a collar of steel, fluted or milled on its inner circumference, which encompasses

each individual piece at the moment the dies strike it. The outer circumference of the piece of gold or silver becomes thus serrated or milled at the instant of coinage. The finished coins now tumble out from the presses in rapid and glistening succession, and slide down inclined planes into trays placed to catch them. They are examined on the surfaces and edges, to ascertain if they are perfect, and then sent out into the "wide, wide world," to do their missions of good or evil.

There is a popular notion that any one taking gold, silver, or copper to the mint can have it at once made into an equal weight of pounds, shillings, or pence, and this at one time was the fact. But it is not so now, except with respect to gold. Any one taking gold to the mint can have it made into sovereigns, and the country bears the whole expense of the coinage. But applications are very rare. The very last private application which was made to the mint came from the late Mr. Peabody, who sent about £10,000 of old gold of all kinds to be made into sovereigns. This has been the only application of the kind made for years.

Monies, Foreign.—See *Foreign Monies.*

Mottoes.—

Attend to your business, or give it up.

Nothing better to drive away care than work.

When you are over the brook, offer your stick to your friend.

It is easy to deceive one'sself.

Fear God, and you will have no cause to fear any one else.

Resist thyself, and thou shalt have peace.

The fear of God purifieth the heart.

A man's behaviour is the index of the man.

The sight of a friend brighteneth the eye.

The restraining the soul is the greatest holy war.

Honour thy father, and thy son will honour thee.

Deal not in false and exaggerated statements.

Wider ears and a short tongue.

Forgive any sooner than thyself.

The danger past, and God forgotten.

Who looks not before finds himself behind.

There are none poor but such as God disowns.

Husbands are in heaven, whose wives chide not.

He that hath love in his heart hath spurs in his sides.

He who serves well need not be afraid to ask his wages.

Little sticks kindle the fire, but great ones put it out.

For that thou canst do thyself rely not on another.

Get thy distaff and spindle ready, God will send thee flax.

All women are good—for something or nothing.

The best remedy against an ill man is much ground between both.

There is one good wife in the country, and every man thinks he hath her.

When the good man is from home the good wife's table is soon spread.

Never violate a promise.

Love and train your children in the love of God.

Choose the virtuous as your constant companions.

Make restitution for the injuries you have done.

Beware of pride and a contentious spirit.

Redeem your mis-spent life.

Think of ease, but work on.

Manners often make fortunes.

A wise man is never poor.

There is no generosity in a liar.

No health with gluttony.

The heart of a fool lieth behind his tongue.

The tongue of a wise man lieth behind his heart.

His grief is long whose life is short.

Happy is he that hath no envy.

He cheats you who makes you angry about a trifle.

Your victory over your enemy is your forbearance.

The word of God is the medicine of the heart.

The praise of a man is under his tongue.

He is a rich man who has God for his friend.

He is the best scholar who hath learned to live well.

Saying and doing do not dine together.

Gifts break through stone walls.

There is no better looking-glass than an old, true friend.

Who has no hands makes light of gloves.

The rudder and the jib are small, but they tack the vessel.

By-and-by street leads to the house of never.

Through not spending enough, we spend too much.

Don't pull in your horse as you are leaping.

A good dog deserves a good bone.

In a false quarrel there is no true valour.

In a calm sea every man is a pilot.

Who does not make a gain loses.

Contradiction should awaken attention, not passion.

He who builds according to every man's advice will have a crooked house.

Honours come from diligence.

Riches come from economy.

Arrogance brings on destruction.

Modesty is attended with profit.

In the days of affluence always think of poverty.

The strength of perseverance gains the prize.

Do not anxiously expect what is not yet come.

He who tells me of my faults is my instructor.

He who tells me of my virtues does me harm.

Mountains, Heights of.—

	Feet.
Mont Blanc (Alps)	15,750
Mont Rosa "	15,150
Finister-aar-Horn (Alps) ...	14,109
Jungfrau " ...	13,716
Ostler Spitz " ...	12,852
Malhacen (Grenada, Spain) ...	11,678
Nethon (Pyrenees)	11,427
Perdu "	11,275
Etna (Sicily)	10,873
Monte Corno (Apennines) ...	9,523
Sneehactha (Doverfield, Norway)	8,122
Lomnitz (Carpathian)	7,962
Deneskin Kamen (Urals) ...	5,387
Mont Mezin (Cevennes) ...	5,819
Puy-de-Sancy (Auvergne) ...	6,215
Ben-Mac-Dui (Scotland) ...	4,390
Vesuvius (Italy)	3,978
Hecla (Iceland)	3,690
Snowdon (Wales)	3,500
Stromboli (Lipari Isles)... ...	3,020

Muscles.—See *Exercise.*

Mustard.—See *Adulterations.*

Muffins, To Make.—Mix together a quarter of a pint of thick yeast and one pint of warm milk; strain and add as much fine flour as will make a batter, and set it in a warm place, covered with a flannel cloth until it has risen. Rub an ounce of butter in some flour quite fine, to this add a quarter of a pint of warm milk, and mix well together. Add then sufficient flour to make it into dough, knead it and cover it over, letting it stand for half an hour longer. Work it up again, break the dough into small pieces, roll them up quite round, and cover them over for about twenty minutes, when they will be light and porous; then bake on a hot hearth, or plank, turning them when one side is done. Muffins made after this recipe will be found much sweeter than those purchased at shops.

Muses, The Nine.—Calliope, the muse of historic poetry; Clio, history; Erato, amorous poetry; Euterpe, music; Melpomene, tragedy; Polyhymnia, rhetoric; Terpsichore, dancing; Thalia, comedy; Urania, astronomy. They originally consisted of three in number, but were augmented to nine, because the Athenians, being desirous of placing in the temple of Apollo the statues of the three muses, and they being of extraordinary beauty, ordered three of the most gifted sculptors to execute, each, the statues of the three muses, which made up the number of nine, and from which it was proposed to select the three most perfect statues. But when the choice came to be made, they found the whole nine so beautiful, that it was agreed to take them all, and call them the "Nine Muses," and place them in the temple of Apollo as such. From this accident (it is thought) they derived their origin.

Music.—The art of music is an essential element in social life and social

culture, and our times have few better movements than the increasing introduction of vocal and instrumental music into popular education. The word is derived from *musa*, the supposition being that the art was invented by the muses. It is true that other derivations have been started, but this is the accepted one.

When, therefore, the muses bestowed on us the boon of harmony, it is natural to conclude it was not dealt out to us in minims, crochets, and quavers; and so one feels inclined to ask, What is the definition of music?—music exclusive of measure, rhythm, metre, &c.

This is our answer. Music is the art of combining harmonious sounds, so as to render them agreeable to the organ of hearing. Now mark that word "combining," because it is an important word. If we strike one note rapidly, three or four hundred times successively, it is not "music," because music must be a *combination* of sounds. With three notes you may form a complete harmony; you may form a melody which *need* not be monotonous, but which, in nine cases out of ten, would be so; only, if you try it, remember to deal largely in change of *emphasis*, in *piano* and *forte*, and we should advise its being in the minor.

And so it was left for mankind to find out the principles of harmony, and we all know more or less of the *science* of music; we know the aid which geometry has afforded as regards the principles of the before-spoken-of combinations, and in other ways; we are familiar, too, with the *speculative* music, which is the more general gift we meet with, namely, a natural knowledge, or perhaps it would be better to say an instinctive perception, of the different ratios of quick and slow, loud and soft, harsh and sweet; also the experience of *practical* music, which, in truth, is the actual putting into practice of *speculative* knowledge, by applying it to the art of composition. But it must not be imagined that your elaborate execution of *roulades* at the top of your voice, or the runs of your triumphant fantasia, come under the head of *practical* music, fair reader; that would be an error, for they are simply mechanical operations, and you are enabled to perform them by your comprehension of the value of the notes, your just conception of the intervals which occur in the practical work which you execute and ornament, but which is not *your* work; even as the workman chisels the marble statue from the clay model, which is the produce of the sculptor's mind.

One word about the *poetry* of music. All who love poetry at all must feel its poetry. Rogers has four beautiful lines about music:—

"The soul of music slumbers in its shell,
Till waked and kindled by the maker's spell,
And feeling hearts, touch them but rightly, pour
A thousand melodies unheard before."

The power of music has been sung by Hogg, the Ettrick Shepherd:—

"Of all the arts beneath the heaven,
That man has found, or God has given,
None draws the soul so sweet away
As music's melting, mystic lay;
Slight emblem of the bliss above,
It soothes the spirit all to love."

While Moore thus says of the soothing influence of music:—

"Music! oh, how faint, how weak,
Language fades before thy spell;
Why should feeling ever speak
When thou canst breathe her soul so well?
Friendship's balmy words may feign—
Love's are even more false than they;
Oh! 'tis only music's strain
Can sweetly soothe, and not betray."

Luther looks upon music as a Divine present to mankind. "It is one of the most magnificent and delightful presents God has given us." And Congreve, in his admiration of the art, thus speaks of its charms—

"Music has charms to soothe the savage breast,
To soften rocks, or bend a knotted oak.
I've read, that things inanimate have moved,
And, as with living souls, have been inform'd
By magic numbers and persuasive sound."

Music is of those arts which spring from the desire for enjoyment, and gratify it. It bears the soul away into the region of the infinite, and moves it with conceptions of exhaustless possibilities of beauty. The music which is now most wanted, however, is music for the common heart. If education will give us the taste for such, and give us the music to satisfy it, it will confer upon us a great benefit. It is not desired that music in the home, or in the friendly

circle, should never wander out of the sphere of the home or the friendly circle, only let not these spheres of feeling be without any strain peculiarly suitable to themselves. No music can be music for the people of home but that which answers to simple and direct emotion. Such is its powerful influence that we have known men stern of feature and of apparently iron frame who, at the sound of some unforgotten melody, have shed tears, and have felt the full force of music, like children.

Musical Phrases.—

Andante ma non troppo e con tristezza. Not too slow, but with pathos.

Andantino sostenuto e semplicemente, il canto un poco più forte. In a sustained and simple style, with the melody somewhat louder than the other notes.

Colla piu gran forza e prestezza. As loud and as quick as possible.

Come 'l primo tempo. In the same degree of movement as at first.

Come tempo del tema. Same degree of movement as the theme.

Cantabile, ornamenti ad libitum, ma più tosto pochi e buoni. In a singing style, with embellishments at will, but few and well chosen.

Con abbandono ed espressione. With self-abandon and expression.

Con brio ed animato. Animated and brilliant.

Con 8va ad libitum. With octaves at pleasure.

Crescendo ed incalcando poco a poco. Greatly augmenting the power and increasing the time.

Crescendo poco a poco. Increasing the sound by degrees.

Crescendo e poi diminuendo. Increasing and then diminishing the sound.

Da capo senza repetizione e poi la coda. Begin again, but without any repetition of the strain, and then proceed to the coda.

Dolce con gusta. Sweetly and tastefully.

Dolce e lusingando. In a delicate and insinuating style.

Dolce e piacevolmente espressivo. Soft and with pleasing expression.

Dolce ma marcato. Delicately, but still sufficiently marked.

FF. principalmente il basso. Very loud, especially the bass.

Il terzo dite a tutte le notte di basso. The third finger on all the notes in the bass.

Istesso valore, ma un poco più lento. The same duration, but rather slower.

L'istesso tempo poi a poi di nuovo vivente. The same time, with gradually increasing animation.

Moderato assai con molto sentimento. A very moderate degree of movement, with much feeling.

Piano, sempre staccato e marcato il basso. Soft, with the bass always well marked and detached.

Poco a poco più di fuoco. With gradually increasing animation and fire.

Poco a poco crescendo, decrescendo. Louder, softer by degrees.

Poi a poi tutte le corde. All the strings, one after another. An expression used in playing the grand pianoforte.

Segue subito senza cambiare il tempo. Proceed directly and without changing the time.

Segue senza interruzione. Go on without stopping.

Sempre piano e ritenuto. Always more and more soft, and falling off in the degree of movement.

Sempre più decrescendo e più rallentando. Gradually softer and slower.

Sempre più forte. . . . . all ffmo. Louder and louder to the fortissimo.

Mutton.—See *Joints, Economy of.*

Nails, The.—With moderate attention, the finger-nails become delicate and ornamental. They should be cut once a fortnight at least, and a sharp penknife produces a smoother edge than scissors do. Clean nails are so essential that in England we never admit that the hand is clean, however well washed, unless the nails are clean also. Biting the nails is an offence against good manners, and richly deserves the punishment it brings with it in the disfigurement it causes. A pretty hand is greatly improved by careful attention to the nails, and even a clumsy one is rendered passable, if the nails be white and clean. The best nail-powder consists of fine oxide of tin, perfumed with otto of lavender, and tinted with carmine. It is

sold by all perfumers in little wooden boxes, holding about an ounce each. It is applied either by rubbing it on to the nails with the finger, or with a nail-polisher, covered with leather.

Speckles on the nails occur when some of the particles of juice which nourishes the nails happen to be intercepted in different places under its substance. They sometimes go off of their own accord, by the growing of the nail, which, as it shoots out in length, carries the speckles along with it; but this is not always the case, therefore we must have recourse to means to disperse them. Apply over the nail a compress, wetted in spirits of wine and camphor, and leave it there several days, wetting it from time to time in spirits of wine, but taking care to remove it as soon as the marbling disappears.

National Debts.—From an interesting paper on war taxation, recently read at Manchester by Mr. William Stokes, we extract the following interesting table:—

	National Debt.	Amount per Head.		
	£	£	s.	d.
Austria... ...	268,965,064...	7	5	8
Belgium ...	25,070,021...	5	0	7
Denmark ...	14,862,465...	8	18	9
France... ...	566,680,057...	14	8	9
Great Britain	797,051,650...	26	10	0
Greece	14,000,000...	12	15	3
Holland ...	81,790,799...	21	17	0
Italy	211,503,298...	9	8	3
Norway ...	1,854,157...	1	1	10
Prussia (1866)	42,123,064...	1	15	8
Portugal ...	42,930,472...	9	17	4
Russia	274,544,770...	8	14	1
Spain	163,927,471...	10	4	6
Sweden... ...	4,114,880...	1	0	0
Turkey... ...	69,142,270...	1	19	1
United States	579,880,391...	18	18	9

From 1794 to 1801 Britain subsidised all Europe to fight her battles against republican France. From 1803 to 1809 she had no less than three coalitions against her—of Austria, Prussia, and Russia. From 1803 to 1812 she stood alone with her allies, Spain and Portugal, against all Europe; and from that time till 1815 she was at the head of the European coalition against Napoleon. In 1812 her expenditure was ninety-six millions sterling; in 1813 it exceeded one hundred millions; in 1814 it swelled to one hundred and eighteen millions; and in 1815 it reached the incredible figure of one hundred and twenty-six millions. There is nothing like this in all history. Those who think that the great public debt with which she is burdened will prevent her, in future, from making such exertions as she did in times past, have not reflected that she is now nearly doubly as populous as she was then; that the value of her private property is three times as great; that her tonnage has more than doubled itself; that, from the increase of gold and silver, money is not worth more than half what it was at that time; that, consequently, had everything else remained precisely as it was, the debt would be only half its nominal value, and that, her advancement in all other respects being considered, she has three times the ability to pay.

Needlework.—See *Girls, Practical Training of*.

Nautical Terms in common use are as follows:—

Avast means stop.

Athwart—Across.

Ballast is iron, lead, or stone placed in the bottom to steady the vessel.

Bearings—The direction of a vessel per compass.

Belay—Make fast.

Bend—Attach; as a sail to the yard, or a cable to the anchor.

Bunting—The material of flags.

Buoy—A floating mark.

Capstan—A machine on deck round which the cable is wound, by means of the capstan bars worked by the men.

Cathead—A piece of wood projecting over the bow, with a sheave in it, through which the anchor is hoisted.

Cleats—Perpendicular hooks pointing up and down, for belaying ropes.

Combings—The raised sides of the hatchways.

Companion—The ladder going down beneath the deck to the cabin.

Davits—Iron rods for projecting the boat over the side to lower her.

Draught—The depth of the vessel under water.

Fenders—Pieces of rope and junk to ward off pressure from the sides.

Fore-and-aft—Lengthwise of the vessel.

Forecastle—The part before the main-mast.

Foul anchor—When it has a turn of the cable round it.

Gangway—The open part of a vessel's bulwarks for passing out.

Gaskets—Pieces of rope used to tie round the sail and yard when the former is furled.

Grapnel—A small anchor.

Hatchway—An opening in the deck.

Hatches—Its covering.

Hawser—A large rope for towing.

Helm—The steering apparatus.

In stays—The time between the letting fly of the jib-sheet and the drawing of the foresail.

Jib-boom—A spar projecting beyond the bowsprit.

Jury-mast—A temporary mast.

Log—A journal of the proceedings at sea.

Log (patent)—A line thrown from the stern to ascertain the rate of sailing by a minute glass.

Luff—Steer nearer to the wind.

Lurch—A roll on one side.

Marling-spike—A pointed iron pin to separate the strands of ropes in splicing them.

Martingale—A short upright spar under the bowsprit.

Missing stays—Failing in going about.

Oakum—Old rope picked to pieces.

Pendant—A long narrow flag at the masthead.

Port—Left.

Quarter—The side of the vessel from the middle to the stern.

Quarterdeck—The part of the deck between the quarters.

Scudding—Running before the wind without sail, or only a foresail, to keep a steerage.

Splicing—Joining two ropes.

Starboard—Right.

Staysail—A sail hoisted on a stay.

Steerage—The fore part of a ship beneath the deck; also, the effect of the rudder on the course.

Tack—To make a decided change in the course without wearing.

Taut—Tight.

Throat—The butt-end of the gaff which clasps the mast.

Unbend—To untie, as the sails from the spars.

Unmoor—To cast off the fastenings which hold the ship.

Waist—The part between the quarter-deck and forecastle.

Wake—The path which a ship makes behind her.

Wear—To come round in the opposite direction to tacking.

Nettle Rash.—This disease takes its name from being attended by an eruption similar to what is produced by the stinging of nettles. In the chronic form, a simple diet, active exercise, an avoidance of any articles of diet likely to excite the eruption; keeping the bowels regular by gentle aperients, combined with anti-acids. A five-grain rhubarb pill an hour before dinner, or a small piece of the root, chewed, are good remedial means. The tepid bath should be occasionally used, or sponging, to keep the skin in a healthy state. To allay the irritations, dust starch powder over the eruptions; or use a lotion made of rose or elder-flower water, in half a pint of which has been dissolved one drachm of carbonate of ammonia and half a drachm of sugar of lead.

New Testament, Order of the Books in the.—

	Chs.		Chs.
Matthew	28	I. Timothy ...	6
Mark	16	II. Timothy ...	4
Luke	24	Titus	3
John	21	Philemon ...	1
The Acts... ...	28	Hebrews... ...	13
Romans	16	James	5
I. Corinthians...	16	I. Peter	5
II. Corinthians	13	II. Peter	3
Galatians ...	6	I. John	5
Ephesians ...	6	II. John	1
Philippians ...	4	III. John... ...	1
Colossians ...	4	Jude	1
I. Thessalonians	5	Revelations ...	22
II. Thessalonians	3		

Nose, Bleeding at the.—To stop this malady, which is sometimes alarming, it is recommended by Dr.

Negrier (who has extensively tried it) simply to *elevate the patient's arm.* The explanation is based upon physiological grounds; the greater force required to propel the blood through the vessels of the arm when elevated causes the pressure upon the vessels of the head to be diminished by the increased action which takes place in the course of the brachial arteries (the arteries of the arms). If the theory be sound, *both* arms should be raised.

Nosegays.—Flowers should not be cut during sunshine, or kept exposed to the solar influence; neither should they be collected in large bundles and tied tightly together, as this invariably hastens their decay. When in the room where they are to remain, the ends of the stalks should be cut clean across with a very sharp knife (never with scissors), by which means the tubes through which they draw the water are left open, so that the water ascends freely, which it will not do if the tubes of the stems are bruised or lacerated. An endless variety of ornamental vessels are used for the reception of flowers, and they are all equally well adapted for the purpose, so that the stalks are inserted in pure water. This water ought to be changed every day, or once in two days at the furthest, and a thin slice should be cleanly cut off from the end of each stalk every time the water is moved, which will revive the flowers.

In the *Cottage Gardener* we find the following remarks on nosegays:—"There are many ways of planting a flower-garden, and as many methods of arranging flowers in a large nosegay; but with the exception of wedding nosegays, which should always be made of the whitest flowers, the arrangement of the flowers may be reduced to three heads.

"First, to make choice of flowers all of one colour, or nearly so, and then using a small quantity of other flowers, that will make a strong contrast with the ground colour.

"Secondly, shading the flowers from the centre to the sides; and, thirdly, quartering the circle with four kinds of colours that harmonize well together, or with two colours in contrast—one quarter of the nosegay being of the same flowers as the quarter opposite to it—or, better still, the colours to be the same in each pair of quarterings, but the flowers to be from two different kinds of plants. Thus, one quarter of some pea-flower of a given colour, and the quarter opposite to it to be of pea-flowers also, but from a different plant. The size of the individual flowers to be as nearly alike as can be; then the other two quarters may be of composite flowers in the same way. This is the most difficult kind of nosegay to make well. When you have a choice and abundance of flowers, shading them is the easiest way, and, when flowers are very scarce, the mixed nosegay is the safest to attempt; but it should never be without a ground colour, if artistic effect is at all attempted."

Novel Reading.—There is much pernicious trash circulated under attractive titles, consisting of highly-wrought fictitious narratives, calculated to poison and pollute the youthful mind with scenes of levity and folly, with expressions, at least, bordering on profanity, by inculcating sentiments of contempt for everything sober and serious, exciting impatience of parental control and religious restraints, encouraging extravagant and ungoverned passions, and giving false views and expectations of life and society. If a young person once imbibe a taste for this kind of reading, the ordinary duties of life will become insipid and irksome. The mind will be excited with desires after the false splendour and sentimental softness of the novel heroine. The simplicity and frankness of youth will be lost amidst plots and contrivances for carrying on some imprudent acquaintance and eluding parental vigilance. Love will be regarded as the great business of human life; and even vice, by its decorations and disguises, will lose half its deformity, and will double its dangerous attractions. At any rate, time, feeling, and property will be unprofitably expended; a sort of unreal existence will be carried on; and a state of listlessness and discontent induced, which will disqualify for the duties and enjoyments of domestic life.

Coleridge, on the subject of novel reading, has well said—"It cannot but be injurious to the human mind never to be called into effort. The habit of receiving pleasure without any exertion of thought, by the mere excitement of curiosity and sensibility, may be justly ranked amongst the worst effects of habitual novel reading. Like idle morning visitors, the brisk and breathless periods hurry in and hurry off in quick and profitless succession; each, indeed, for the moment of its stay presents the pain of vacancy, while it indulges the love of sloth; but altogether they leave the mistress of the house—the soul, I mean—flat and exhausted, incapable of attending to her own concerns, and unfitted for the conversation of more rational guests."

Girls learn from such books to think coarsely and boldly about lovers and marrying; their early modesty is effaced by the craving for admiration; their warm affections are silenced by the desire for selfish triumph; they lose the fresh and honest feelings of youth while they are yet scarcely developed, and, although it may seem that we are going too far in asserting so much, they, like forced fruits, become mature before they have received the stamp of Nature's laws.

Numerals, Roman.—

I	1	XLII	42
II	2	XLIII	43
III	3	XLIV... ...	44
IV	4	XLV	45
V	5	XLVI	46
VI	6	XLVII ...	47
VII	7	XLVIII ...	48
VIII	8	XLIX... ...	49
IX	9	L	50
X	10	LX	60
XI	11	LXX	70
XII	12	LXXX ...	80
XIII	13	XC	90
XIV	14	C	100
XV	15	CC	200
XVI	16	CCC	300
XVII	17	CD	400
XVIII	18	D	500
XIX	19	DC	600
XX	20	DCCC ...	800
XXX	30	CM	900
XL	40	M	1000
XLI	41		

Numeration Table.—

Hundreds of Millions.	Tens of Millions.	Millions.	Hundreds of Thousands.	Tens of Thousands.	Thousands.	Hundreds.	Tens.	Units.
						2	3	1
			2	0	4,	5	1	1
7	2	1,	4	6	8,	9	5	3

Read Thus:—

First line.—Two hundred and thirty one.

Second line.—Two hundred and four thousand, five hundred and eleven.

Third line.—Seven hundred and twenty one millions, four hundred and sixty eight thousands, nine hundred and fifty three.

Nursery.—See *Girls, Practical Training of.*

Nutmeg, The.—The true nutmeg, as well as the clove (which *see*) is a native of the Moluccas, or Spice Islands, but is principally confined to the groups called the Islands of Banda, under the equator, where it bears blossoms and fruit at all seasons of the year. The latter is gathered at three different periods, namely, in July, November, and April. The mace is there in July, when the nut is most abundant; in November, it is superior, but in April, both the nutmeg and the mace are in the greatest perfection, the season then being the driest. The outer pulpy coat is removed, and afterwards the mace; which latter, when fresh, is of a crimson colour, and covers the whole nut. The nuts are then placed over a slow fire, when the shell next to the mace, and which contains the seed, becomes brittle, and the seeds, or nutmegs of commerce, drop out. They are then soaked in sea-water, and impregnated with lime, a process which answers the double purpose of securing the fruit from the attack of insects, and of destroying the vegetating property. It also prevents the volatilisation of the

aroma. The mace is simply dried in the sun, and then sprinkled with salt water, when it is fit for exportation.

Nutriment and Digestion, Comparative Table of, Contained in Articles of Food.—The figures appended to each article in the annexed Table show the proportion in every 1,000 parts:—

Mutton	290	Almonds	656
Chicken	270	Beets	148
Beef	260	Potatoes	120
Veal	250	Carrots	98
Pork	240	Cabbage	73
Fish, about	200	Turnips	42
White of egg	140	Melons	30
Milk	72	Cucumbers	25
Wheat	950	Plums	290
Peas (dry)	930	Grapes	270
Barley	920	Cherries	250
Beans (dry)	890	Peaches	200
Rice	880	Gooseberries	190
Bread	800	Apples	170
Rye	792	Pears	160
Oats	742	Strawberries	120

From Dr. Beaumont's Table it appears that the following articles were converted into chyle—that is, digested—in the times indicated:—

	H.	M.		H.	M.
Rice, boiled soft	1	0	Eggs, raw	2	30
Apples, ripe	1	30	Eggs, soft boiled	3	0
Sago, boiled	1	45	Eggs, hard boiled	3	30
Bread, stale	2	0	Beef, roast or boiled	3	0
Milk, boiled	2	0	Beef, salted	5	30
Cabbage	2	0	Mutton, roast or boiled	3	[illegible]
Custard, baked	2	45	Pork, boiled	3	30
Parsnips, boiled	2	30	Pork, salt and boiled	4	30
Potatoes, roasted	2	30	Pork, roast	5	30
Potatoes, boiled	3	30	Veal, roast	5	[illegible]
Turnips, boiled	3	30	Turkey and goose	2	30
Carrots, boiled	3	15	Domestic fowls	4	30
Butter and cheese	3	30	Wild fowls	4	[illegible]
Venison	1	35			
Oysters, raw	2	30			
Oysters, stewed	3	30			

Oatmeal.—The oat, though not much cultivated in South Britain as an article of food for man, still furnishes one of the most important and productive crops of the farm. Its scientific Latin name, *avena*, is of doubtful interpretation; from it the French derive their word, *avoine*. It appears certain that all the cultivated species flourish most in cold climates. In Scotland, for example, it arrives at great perfection, as well as in the northern counties of England. To the Scots its meal is important; they use it in great quantities, not merely in the form of water-gruel, but in porridge and puddings. But Scotch oatmeal is a very different thing from the poor, perishable article which is sold in England. The grain is dried and husked by a peculiar process, and then is ground to three degrees of fineness. It will keep and improve in quality during any length of time, and the more it is pressed the better.

No one could look on the Scottish peasantry, with whom it is the chief article of subsistence, without feeling that this grain is adequate to the supply of man's necessities in this respect. Living on little else than oatmeal bread, and oatmeal porridge, and butter-milk, with a broth almost wholly vegetable—the well-known *kail*—these men are proverbially hardy and strong, subject to few ailments, living to a fully average age, and capable of enduring a great deal of fatigue.

Oatmeal is used as "stirabout" in Ireland, porridge or porritch in Scotland, and hasty pudding in England. The latter is made by gradually stirring oatmeal into boiling water until it has attained sufficient consistence, and it is eaten with milk, or butter-milk, or treacle, or butter, according to the tastes and circumstances of the consumers. This forms a remarkably light, unirritating kind of food—an article of diet peculiarly adapted to the stomachs of children, and little less so to those of dyspeptics. It is unstimulating; it is very easily digested; and it contains a very considerable proportion of nutriment.

Oat-cake, made by baking a paste of oatmeal and water, rolled out thin, on a girdle, or slab of iron or stone, placed over the fire, is another way in which oatmeal is prepared. There are two kinds of oat-cake; one of which is more commonly made use of in Scotland, the other being more used in Yorkshire and the adjacent counties. The first of these kinds is made by simply working up meal and water into a paste, rolling it out to a sufficient degree of thinness, and baking it forthwith. In the Yorkshire kind the paste is made to undergo some degree of fermentation. The first kind is very short and dry; the second kind is much tougher and moister. Of the two, perhaps the unleavened variety is the more digestible. (See *Gruel*, *Adulterations*, and *Complexion*.)

Object Lessons for Children.—We give the following example as a specimen of the clear and simple style in which Mr. Charles Baker, of Doncaster, sets forth his instruction for the young, termed the "Circle of Knowledge."

All things that we can see are *objects*. A stone, a book, a tree, a bird, a horse, a pin, a leaf, a star, a hat, are all *objects*. Some of these *objects* were made by men, others created by God. The hat, the pin, the book, were made by man. The stone, the tree, the bird, the horse, the star were made by God.

EXPLANATIONS.

Object.—The things we perceive about us, as men, animals, books, chairs, &c.

Made by man.—Formed by man's hands, or with tools, as chairs, candles, pins, &c.

Created.—To create is to cause to exist. God created the sun, moon, trees, animals, &c.

God.—The Great Being who created all other beings and things.

By *man.*—But man could not make them without materials; he could not make tables without wood, bricks without clay, &c.

By *God.*—Who calls into existence all the materials which man uses.

QUESTIONS.

What are all the things we see called?

Tell me some of the objects around us?

What objects are named in the lesson?

Which of them were made by man?

Of what materials are tables made?

Which objects were not made by man?

Who called them into existence?

Name some objects, not mentioned in the lesson, which were not made by man?

Name some objects, not yet mentioned, which were created by God?

This plan of instruction to infantile capacities, renders the task of tuition pleasing to the teacher, because to the learner, who is led on by such easy graduations, and is thus instructed and amused the while; so that he deems not the paths of knowledge steep, and rough with difficulties.

Odd Sorts, GAME OF.—Put into a bag several pieces of paper, on each of which is written one word, such as "Song," "Tale," "Poem," "Wit," and then pass it round to the company. Each individual must draw one piece, and whatever is written on his slip he must either perform or pay a forfeit. For instance, if he draw "Song," he must sing one; if "Poem," he must repeat a piece; and if he have not *wits* to enable him to strike off a brilliant *impromptu*, he must borrow from our old friend, Joe Miller. It is not necessary to be original in this game, but it *is* necessary not to be prosy, and thus bore one another by *lengthy* tales, songs, or pieces of music.

Oil, A DROP OF.—The various locks, bolts, and bars of a house should be oiled every two or three months. The house will last much longer, and will be much more quiet to live in. The street door will shut gently, with luxurious ease, and with the use of a small amount of force. A neglected lock requires great violence to cause it to shut, and often so much violence that the whole house, its doors, its windows, its very floors and joists, are much shaken, and in time they get out of repair in all sorts of ways, to say nothing of the dust that is dislodged every time the place is so shaken. The incessant banging of doors, scrooping of locks, creaking and screaming of hinges, is a great discomfort. Even the bell-wire cranks should be sometimes oiled, and they will act more certainly, and with such gentle force that there will be little danger of breaking any part of them. The castors of tables and chairs should be sometimes oiled, and they will move with such gentle impulse, and so quietly, that a sleeping child or elderly person is not awakened. A well-oiled door-lock opens and shuts with hardly a whisper. Three pennyworth of oil used in a large house once a year will save many shillings in locks and other materials, and in the end will save many pounds in even the substantial repairs of a house; and an old wife living and sleeping in quiet repose will enjoy many more years of even temper and active

usefulness. Do not forget to oil the locks; housekeepers will find it largely contribute to the comfort of a house, and to its durability.

Oil-Cloth, To Make.—The manner of making oil-cloth is very simple. Place some good rosin or gum-lac over the fire in drying linseed oil till the rosin is thoroughly dissolved, and the oil brought to the thickness of a balsam. Spread this upon canvas, or any linen cloth, so as fully and entirely to glaze it over; suffer it to dry perfectly; and it will be found impenetrable to wet of every description. To give a colour to this varnish, grind the blue, green, &c., with the last coat that you lay on. A better method than the above is first to cover the canvas, &c., with a liquid paste, made with drying oil in the following manner:—Take Spanish white or tobacco-pipe clay, which has been completely cleaned by washing and sifting it from all impurities, and mix it up with boiled oil, to which a drying quality has been given, by adding a dose of litharge one-fourth the weight of the oil. This mixture, being brought to the consistence of thin paste, is spread over the cloth, &c.; when the first coating is dry, a second is applied. The unevenness occasioned by the coarseness of the canvas or the unequal distribution of the paste, is smoothed down with pumice-stone reduced to powder and rubbed over the canvas with a bit of soft serge or cork dipped in water. When the last coating is dry, the canvas must be well washed in water, to clean it; and when dry, a varnish composed of gum-lac dissolved in linseed oil boiled with turpentine, is applied, and the process is complete. The colour of the varnished canvas thus produced is yellow.

Oil-Colour Cakes, To make.—The following preparation for the use of artists has been inserted by Mr. W. Blackman:—"Take of the clearest gum mastic, reduced to fine powder, four ounces; of spirits of turpentine, one pint: mix them together in a bottle, stirring them frequently till the mastic is dissolved; if it is wanted in haste, some heat may be applied; but the solution is best when made cold. Let the colours to be made use of be the best that can be procured, taking care that by washing &c., they may be made as fine as possible. When the colours are dry, grind them on a close, hard stone (porphyry is best) in spirits of turpentine, adding a small quantity of the mastic varnish; let the colours so ground become again dry, then prepare the composition for forming them into cakes in the following manner:—

"Procure some of the purest and whitest spermaceti you can obtain; melt it over a gentle fire in a clean earthen vessel; when fluid, add to it one-third of its weight of pure poppy oil, and stir the whole well together; these things being in readiness, warm the stone on which your colours were ground; next grind them fine with a muller; then, adding a sufficient quantity of the mixture of poppy oil and spermaceti, work the whole together with a muller to a proper consistence; take then a piece of a fit size for the cake you intend to make, roll it into a ball, put it into a mould, press it, and it will be complete. When these cakes are to be used, they must be rubbed down in poppy, or other oil, or in a mixture of turpentine and oil, as may best suit the convenience or intention of the artist."

Oil and Candles.—See *Gas*.

Old Testament, Order of the Books in the.—

	Chs.		Chs.
Genesis...	50	Ecclesiastes ...	12
Exodus ...	40	Song of Solomon	8
Leviticus...	27	Isaiah ...	66
Numbers ...	36	Jeremiah ...	52
Deuteronomy...	34	Lamentations...	5
Joshua ...	24	Ezekiel ...	48
Judges ...	21	Daniel ...	12
Ruth ...	4	Hosea ...	14
I. Samuel...	31	Joel ...	3
II. Samuel ...	24	Amos ...	9
I. Kings...	22	Obadiah...	1
II. Kings...	25	Jonah ...	4
I. Chronicles ...	29	Micah ...	7
II. Chronicles...	36	Nahum ...	3
Ezra ...	10	Habakkuk ...	3
Nehemiah ...	13	Zephaniah ...	3
Esther ...	10	Haggai ...	2
Job ...	42	Zechariah ...	14
Psalms ...	150	Malachi ...	4
Proverbs ...	31	(See *New Testament*.)	

Olive Oil.—The olive tree grows wild and in luxuriant grandeur in the Holy Land, and its fruit and the oil derived from it were, and are, used by all the dwellers in Syria and Judea. The olives of the Grecian isles have long been famous, and a great quantity of oil is exported from that portion of the world every year. Italy is also famous for its olives and its oil; throughout all the district of Otranto there is scarcely anything else cultivated. The port of Gallipoli, in that country, from which this oil is exported in great quantities to Germany, France, and England, has given its name to the oil, which is known to many only as Gallipoli oil, and not that produced from the olive. The olive tree bears when two years old, but not fully for six years afterwards, when it becomes a source of wealth to its owner. It lives to a great age—three, four, and even seven hundred years—and bears abundantly during all that time. There is a celebrated tree in Pescia, in Italy, which is seven hundred years old, and bears two or three hundredweight of oil yearly.

When the fruit is fully ripe, it is gathered, generally by hand, and crushed in a mill, consisting mostly of a single stone, turned in a circular bed. When the pulp is sufficiently crushed, it is placed in sacks, and heaped on the platform of a press. This pulp is submitted, at first, to a very low pressure in the press, and the oil so obtained is beautiful and sweet, and is of the first quality for table use, known as "salad oil." After the fine oil is extracted, there yet remains a considerable quantity mixed with vegetable albumen. The bags of pulp are therefore lifted up, and into each is poured a small quantity of boiling water. This causes the pulp to swell, the albumen coagulates, and the more fluid oil flows freely. A certain quantity, however, remains in the refuse, which is subject to further treatment, and is principally used for making soap.

As soon as the first run of fine oil is obtained, it is conveyed, in skins, to reservoirs, for future good keeping. The town of Gallipoli, being built on a rocky island, is famous for its caverns, where the oil is placed, and where it soon clarifies, and can be preserved without becoming viscid. The fine oil called *Florence* oil is brought from Leghorn, in bottles, and is of the first quality.

Onions affecting the Eyes, To Prevent.—When peeling onions, the following hint may be useful to those whose eyes are apt to become suffused with tears:—While peeling onions, put a large needle in the mouth, half in and half out. The needle attracts the oily juice of the bulb, and any number may be peeled with impunity. To servants this simple fact is invaluable.

Onion Sauce.—Boil the onions until tender, changing the water occasionally, to render them more mild. Strain and mash the onions in a bowl, adding butter and salt. Warm up again, and mix the whole thoroughly.

Opal, The.—When first removed from its native bed, the opal is soft and flexible, but hardens considerably by exposure to the air, although it always requires the greatest caution in cutting. The flaws with which it often abounds do not mar its beauty, as its brilliant iridescence depends upon the reflection and refraction of light, the decomposition of which is caused by these seeming flaws. It is composed of silica and water, and is liable to injury from dust and grease, which fill up the small cracks or fissures of the flinty substance, and thus detract from its brilliancy. To the opal all the leading and protecting influences attributed to the other gems have been assigned, and, as on its surface are displayed the colours of every known jewel, so was it supposed to combine all their useful and prophetic properties.

Opium.—See *Adulterations*.

Optical Illusion.—Take a piece of pasteboard, about five inches square, roll it into a tube with one end just large enough to fit round the eye, and the other end rather smaller. Hold the tube between the thumb and finger of the right hand (do not grasp it with the whole hand); put the large end close against the right eye, and with the left hand hold a book against the side of the tube. Be sure and keep both eyes

open, and there will appear to be a hole through the book and objects seem as if seen through the hole instead of through the tube. The right eye sees through the tube, the left sees the book, and the two appearances are so confounded together that they cannot be separated. The left hand can be held against the tube instead of a book, and the hole will seem to be seen through the hand.

The following is another illusion, and capable of trial. Here is a set of ordinary capital letters and figures:—

S S S S Z Z Z Z, 3 3 3 3 3 3 8 8 8 8

They are such as are made up of two parts of equal shapes. Look carefully at these, and you will perceive that the upper halves of the characters appear the same size as the lower halves. Now turn the page upside down, and without any careful looking you will see that there is a considerable difference, the real top half of the letter being very much smaller than the bottom half. It will be seen from this that there is a tendency in the eye to enlarge the upper part of any object upon which it looks.

Oranges, Whole, To Preserve.—Cut a hole at the stem end of the oranges, the size of a sixpence, take out all the pulp, put the oranges into cold water for two days, changing it twice a day; boil them rather more than an hour, but do not cover them, as it will spoil the colour; have ready a good syrup, into which put the oranges, and boil them till they look clear; then take out the seeds, skins, &c., from the pulp first taken out of the oranges, and add to it one of the whole oranges, previously boiled, with an equal weight of sugar to it and the pulp; boil this together till it looks clear, over a slow fire, and when cold fill the oranges with this marmalade, and put on the tops; cover them with syrup, and put brandy paper on the top of the jar. It is better to take out the inside at first, to preserve the fine flavour of the juice and pulp, which would be injured by boiling in the water.

Ornament, A Cheap and Philosophical.—Fill a clear glass bottle with distilled water, in which dissolve some sugar of lead, about a pennyworth to half a pint of water. Insert a scrap of sheet zinc into the cork, long enough to reach half way down the bottle when the cork is in; the lower part of the zinc may be cut into two or three forks and twisted like branches of a tree. The strip of metal is no sooner immersed in the solution than the latter begins to act chemically upon it, and feathery crystals of lead will cover the whole of the submerged portion. The deposit and growth of the lead may be watched with a magnifying glass, and will continue for some hours. It can only be stopped by carefully pouring out the solution and replacing it with distilled water; it will, however, cease of itself when all the lead is deposited. The result looks like an inverted tree or bush, with thick metallic foliage, glistening as the light happens to fall upon it. It need scarcely be remarked that sugar of lead is *poisonous* to swallow.

Ornamental Hair. — See *Hair Work*.

Ornamental Jellies.—See *Jellies*.

Oxygen.—This is the most important of the elements. It is in some way concerned in nearly all chemical changes, and in most of them it takes a very prominent share. The condition of oxygen is that of a gas—that is, it resembles common air, which is a mixture of several gases. Some gases, when exposed to great cold, are brought down to the liquid, and even the solid state; and others are condensed into liquids by pressure; but no degree of cold or pressure ever yet applied has been able to overcome or destroy the gaseous properties of oxygen; chemical force alone can do this.

Oxygen is transparent, colourless, tasteless, and inodorous, like common air; it is about one-tenth heavier than that body, and possesses the same mechanical properties. It acts neither as an acid nor an alkali, and is dissolved sparingly by water, one hundred gallons absorbing about four and a half of the gas.

The term oxygen signifies acid-former. It was applied by Lavoisier, who supposed it to be the active principle of all acids, an opinion now known to be fallacious. There is reason to believe that

oxygen is capable of existing in two atmospheric states, a passive or quiescent state, and an active condition in which its affinities are greatly exalted. The ozone discovered in the atmosphere by Professor Schonbein, concerning which so much has been said, is supposed to be the active form of oxygen.

The leading principle of oxygen is the intense energy with which it unites with other substances. So vehement is this action that fire is produced; and, hence, oxygen is the great supporter of combustion. All substances which burn in the air burn in pure oxygen gas with greatly increased brilliancy. An extinguished candle plunged into it is instantly relighted if the least spark of fire remain upon the wick. Iron wire burns in it with vivid scintillations, and phosphorus with a light so brilliant that the eyes cannot endure it.

Oxygen was discovered by Dr. Priestley in 1774, and it has been justly pronounced the "capital discovery of the last century, rivalling in importance the great discovery of gravitation, by Newton, in the preceding century." It disclosed the phenomena of nature in an entirely new aspect, exploded the old theories, and laid the foundation of modern chemical science.

The most interesting relations of oxygen are to the animal kingdom. It is the universal supporter of respiration, and, as this is a vital process, it is a supporter of life. The lungs of land animals, and the gills of fish, are both adapted to the same purpose—to absorb oxygen; the one from the air, the other from water.

An animal confined in a given bulk of air, having consumed its oxygen, dies. If confined in the same bulk of free oxygen, it lives about thrice as long, and more than ten times as fast. A mouse placed in a jar of oxygen, breathes very quickly, becomes highly excited, and springs about with the greatest activity. But the effect is too powerful; over-action, fever, and, in a short time, death, are the results.

The chemical action that here takes place is simple oxydation, the same that occurs in the open combustion of fuel, only in a less intense degree. The oxygen combines with the elements of the body, oxydising or burning them, and the products of the combustion pass from the system by the various channels. Its action upon the living system is the same as upon dead matter—purely destructive. It enters the lungs, is absorbed by the blood, and is carried to every part where blood-vessels are to be found. Every organ, muscle, tissue, membrane, and nerve is wasted away, burnt to poisonous gases and ashes, and thrown from the system as dead and useless matter; and if these constant losses are not replaced by the due supply of food, emaciation ensues. The fat, being most combustible, is burnt first; the muscles then soften, shrink, and decay; and lastly the brain is attacked, delirium results, and life ceases. This is called starvation; it is oxydation—absolute burning to death.

The chemical properties of oxygen are a source of power which is made use of to produce the greatest mechanical effects. When we say that the affinities of oxygen are energetic, it is meant that, in combining with bodies it gives rise to vast force. A bushel of coals properly consumed in a steam-engine, produces a power sufficient to raise seventy millions of pounds weight a foot high. The origin of this prodigious force is the chemical union of almost 200 pounds of oxygen with the carbon of the coal. Oxydation, or the affinity of oxygen for the elements of fuel, is thus the ultimate source of all steam power.

Oyster Sauce.—The oysters are to be bearded and scalded, then strain the liquor, and thicken it with a little flour and butter, adding lemon juice in small quantity, and a few tablespoonfuls of cream; heat the oysters well in this mixture, but do not let them boil; some persons add spices in making oyster sauce, in which case it must be left longer on the fire, simmering gently, but never being allowed to boil.

Ozone.—See *Oxygen* and *Air*.

Palm Sunday.—This day, the Sunday before Easter, is the commencement of Passion Week, and is therefore sometimes called Passion Sunday, in

commemoration of the sufferings of our Saviour. In Catholic countries, on this day, the priests bless branches of palm, which are carried in procession in memory of those strewn before our Lord at His entrance into Jerusalem. After the procession is over the branches are burnt, and their ashes preserved for sprinkling on the heads of the people on Ash Wednesday (which *see*).

Paper Table.—

24 Sheets	=	1 Quire.
20 „	=	1 Quire of outsides.
20 Quires	=	1 Ream.
20½ „	=	1 Printer's Ream.
10 Reams	=	1 Bale.
60 Skins	=	1 Roll of Parchment or Vellum.

Paper, To Make Transparent.—Artists, architects, land surveyors, and all others who have occasion to make use of tracing paper in their professional duties, now have it in their power to make any paper capable of the transfer of a drawing in ordinary ink, pencil, or water colours; and even a stout drawing paper can be made as transparent as the thin, yellowish paper at present used for tracing purposes. The liquid used is benzine. If the paper be damped with pure and fresh-distilled benzine, it at once assumes transparency, and permits of the tracing being made, and of ink or water-colours being used on its surface without "running." The paper assumes its opacity as the benzine evaporates; and if the drawing is not completed the requisite portion of the paper must be again damped with the benzine. The transparent calico, on which indestructible tracings can be made, was a most valuable invention, and this new discovery of the properties of benzine will prove of service to many branches of the art-profession, in allowing the use of stiff paper where formerly only a very slight tissue could be used.

Papers for Rooms.—Many elegant patterns are displayed on coloured grounds; the effect may please in one room, which in another will be displeasing; yet the cause will be inexplicable: light, more or less, will account for the difference. Coloured grounds, however pale, will always be too gloomy in rooms which have not much light. In large towns this is an essential matter for consideration; even in the country the aspect and number of windows will produce a surprising difference in the general effect. Nor ought any erroneous idea to be entertained that a paper with much white in it will quickly soil, and therefore must be more extravagant; for if white soils, colours fade.

A room, then, scantily supplied with windows, ought never to be papered with a coloured ground; for the same reason, the doors, shutters, and other woodwork, should invariably be white. Apartments well supplied with light may rejoice in a less confined range of colours—may even sport a drab ground and drab paint to match.

Another failure in effect—little suspected in the choice of colours—even where light can be commanded to a limited extent, is the want of consideration of the line that will best "light up." Exquisite as is pale blue in itself, it is heavy in a mass; and even when sparingly introduced—yes, even in small partitions among gilding and pure white (as in large concert rooms)—it dulls the whole. A blue dress by candle-light is unsatisfactory, and a room with blue-grounded paper and blue paint to correspond, will never light well at night; an apartment similarly decorated with buff, or "flesh" colour, that would require but six wax candles to produce a cheerful and sufficient illumination, if blue would swallow up the light of eighteen candles, and *then* not produce an agreeable impression. Pale flesh and pink, or buff, are very charming hues, but are ill for the complexion; few people look in health with much of these colours around them; and blue is trying; white, with a *hint* of blush, or tint of stone, is good. The most perfect—or rather the nearest approach to perfection—is a paper with a pure white ground, and running pattern of shaded slates, and white paint "picked in" with pale slate to correspond.

Papier-Mache.—Paper of a porous nature is saturated with a solution of flour and glue, and then applied to a mould somewhat smaller than the

object required. These moulds are of iron, brass, or copper. Repeated layers of these papers are made to adhere, by means of the glue, a drying of 100° of Fahrenheit taking place between each coat. When the proper substance is obtained, it is taken from the mould and properly planed, and filed to shape. The thickness of the article varies according to circumstances; an ordinary tea-tray takes about ten layers. A tar varnish, mixed with lampblack, is now laid on, after which the article is stoved, and several coats of this varnish are applied, followed in each case by a stoving. When sufficiently covered with this preparation, the inequalities are removed with pumice-stone, and the work of the artist commences. After he has executed the design, either in bronze-powder, gold, or colour, as may be desired, several coats of shellac varnish are applied, and this is hardened in the stove at 280° Fahrenheit. The article is now rubbed with rotten-stone and oil, to obtain a polish, and perfected to a brilliant surface by rubbing with the hand.

Although it bears a French name, *papier-mâché* was first made about the middle of last century, in England, the inventor being the father of Joseph Wilton, R.A. His workshops were in the neighbourhood of Cavendish Square, and his show-rooms at Charing Cross.

Parrots.—The parrot family comprise six divisions; the principal being—the Macaws, which include the cockatoo and toucan; the parrots, which include the paroquets; and the lories.

The MACAWS are distinguished from the true parrots by having the cheeks bare of feathers, and the tail very long. They are extremely graceful in form and motion, have rich plumage, are lively and very noisy, occupying a great part of their time in discordant screeching. In the hall or drawing-room they are entirely ornamental, from the beautiful metallic reflections which play over their plumage.

The macaws are mostly natives of the hot regions of America, and especially South America, where they nestle in the holes of decayed trees, which some species excavate, as do our woodpeckers.

The food of the macaws is chiefly dry seeds, or the fruit of the palm, and in the coffee-growing lands, they eat coffee-berries; but here, in confinement, we must nourish them differently. The red and yellow macaw must have white bread soaked in milk, and moistened biscuit; it is injured by meat, pastry, or sweetmeats. It has admirable powers of articulation, while the blue and yellow macaw imitates the mewing of cats, barking of dogs, bleating of sheep, &c., with great facility and accuracy. The great green macaw—of a beautiful bright grass-green, diversified with blue and red, and shaded with black or deep blue—is valued for its variety, as well as for its beautiful plumage and exceedingly docile and amiable temper; it will repeat almost any lesson immediately, call persons whom it is accustomed to see by their several names, and is fond of children—which the other macaws are not.

In a wild state the great green macaw inhabits the warm districts of the Andean chain of mountains in South America, sometimes living at an elevation of 3,000 feet.

The COCKATOOS may be recognized by the beautiful crest of feathers on the head. The name is derived from the loud and distinct call-note of some of the species, sounding like "Cock-a-too," very distinctly uttered. These birds come from Australia and the Indian Isles; they live on seeds and fruit, and can crack the stones of the hardest fruits; their colour is mostly white, tinged with rose-red or sulphur-yellow; they are not capable of speaking more than "cock-a-too."

The great white cockatoo should have a wire bell-shaped cage, or be chained to a perch in the open air, if the weather be warm. Feed it with all kinds of nuts, mealy seeds, and bread and milk. The sulphur-crested cockatoo is a most agreeable pet—playful, jocular, and affectionate.

The great red-crested cockatoo is the largest and handsomest of the species. Some of the feathers of its crest are six inches long, of a rich orange colour at the base. This is not so gentle and caressing a bird as the more common cockatoo. It has a loud, trumpet-like

voice, with which it shrieks out its own name, and calls "Derdeney," clapping its wings the while like a cock, whose crow, as well as the cluck of the hen, and the various cries of different animals, it readily imitates. It is not a delicate bird, and may be easily reared and kept.

The TOUCANS are known at once by their enormous bills, which are curved and hooked, and toothed at the edges, and are thus formidable weapons. In America they go in little flocks of from six to ten; and, although heavy fliers, will reach the tops of the tallest forest trees, where they are fond of perching. They will eat almost anything. Their mode of eating solid food is very peculiar—when the morsel is presented they take it on the point of the bill, throw it upwards, and then catch it in the open mouth so dexterously that it goes at once into the aperture of the gullet, and is swallowed without difficulty.

The toucans are so sensible to cold that they dread the night air, even in tropical climates; it is necessary, therefore, to keep them in a warm temperature. They do not speak—their utterance is merely a kind of croak. The preacher toucan has a singular cry, which it almost constantly utters. It comes from Guiana and the Brazils. It is easy to tame and keep.

The TRUE PARROTS are less elegant than the macaw tribe—less splendid in colour than the lories—but are excellent imitators, and can articulate words and sentences very distinctly. The ash-coloured or grey parrot is one or the commonest, largest, and most tractable of its tribe. It is about the size of a pigeon. It is an African bird. It will eat anything; but the best food for it is bread and milk. The memory of the grey parrot is most extraordinary; it will retain entire verses and passages of considerable length. Some grey parrots live to fifty, sixty, seventy, or even a hundred years. It moults regularly once a year.

The PAROQUETS are smaller than the true parrots—more slender and elegantly proportioned, with long, pointed tails; several from Africa and Asia have rings round their necks. Thus you may easily distinguish the paroquets from the parrots, which are all stout, heavy birds, with short and even, or slightly rounded tails.

The LORIES are so named from the call-note of some of the species. They are gorgeously beautiful, but exceedingly difficult to preserve in a cold climate. There are many varieties, but here we shall only mention the purple-capped lory—a very rare and costly bird, of resplendent tints. It utters "Lorie," squeaks incessantly, and as hollow as a ventriloquist; imitates everything, and in clear, round tones; but it requires to be constantly amused and caressed. It is a truly wonderful bird—the most highly endowed of the whole parrot race.

The parrot-keeper should bear in mind that these birds require large, roomy cages, and the larger birds open perches; the eating and drinking vessels *not* of zinc or pewter, but of glass or porcelain; coarse sand sprinkled on the floor—in warm weather cleaned out every day, in cold weather twice a week. Carefully guard all kinds of parrots from *cold*, but give them plenty of sunshine and fresh warm air, when you can do so. Let them out amid flowers, shrubs, or in a green-house; and, in teaching your parrots, never threaten or punish, but repeat the lesson frequently, and reward with choice morsels. Take care the bread and milk be not sour, and vary it with biscuit, grain, nuts, and fruits; and, for the small birds, add hemp and canary-seed and millet. Give no meat; and take care how you indulge your pet with pastry and sweets.

Parsley.—This is the herb most in use for garnishing and cookery. There are two sorts, the plain-leaved and the curly. The latter should always be preferred, being more beautiful, whether growing or on the dish, and easily distinguished from the *Æthusa*, or fool's parsley—a species of hemlock which is poisonous. The best mode of cultivating it is by seed, sowing where it is to remain, any time between the first of March and the middle of June; and, if the stalks are cut down occasionally, to prevent their seeding, it will last for several years. The seed, which should be buried about an inch deep, is a long

time vegetating, the plant not appearing above ground for five or six weeks. Parsley may be cultivated by transplanting some young roots—the younger the better—watering and shading until they have taken root and hold their heads up. Many pot herbs are almost as good for use dry as green; but this is not the case with parsley, which is infinitely better for all purposes when fresh. By covering it over with some loose bamboo in the winter, the young leaves will be sheltered, and it might be gathered as wanted, all the year round.

Parties, Practical Hints on Giving.—Our hints on this extensive subject must of course be taken generally. First, then, with regard to the *convives;* this must depend upon the inclination or circumstances of the host and hostess. Large dinner parties, as of fourteen or sixteen in number, are rarely so satisfactory to the entertainer, or to the guests, as small parties of six or eight. Some writer on amphitrionic duties, says:

"Crowd not your table—let your numbers be
Not more than seven—and never less than three."

We prefer, however, leaving this point to the judgment of those who are most interested. As a general maxim, in giving parties, we should say, everything that unites neatness with comfort should be attended to; elegance ought to give way at all times to comfort.

To ensure a well-dressed dinner, provide enough, and beware of the common practice of having too much. The table had better appear rather bare than crowded with dishes not wanted, or such as will become cold before they are partaken of. This practice of over-loading tables is not only extravagant, but troublesome. The smaller the dinner, when sufficient, the better will be the chance of its being well cooked.

Vegetables in abundance, and well dressed, are important in a dinner, and it is a good plan to serve a fresh supply with each dish, to ensure them hot. In France more attention is paid to the dressing of vegetables than in England; and the French, consequently, produce these cheap luxuries in high perfection.

Before a dish is placed upon the table, its sauces and vegetables should be set in their proper places. Between the serving of each dish should be a short interval, which will not only be pleasant to the guests, but will give time to the cook and attendants. There should be a reserve of sauces as well as of vegetables; for nothing lessens the enjoyment of a dinner so much as a short supply of these adjuncts.

A chief point to be attended to for a comfortable dinner is, to have what you want, and when you want it. It is vexatious to wait first for one thing and then another, and to receive these little additions when what they belong to is half or entirely finished. One or more sets of cruets, according to the size of the party, should be placed upon the table; those cruets should contain such articles as are continually wanted, and special attention should be paid to the freshness of their contents.

Much money is often unnecessarily expended in pastry and desserts. A few kinds of ripe fruit, in season, and not forced, are sufficient, though the morning is the best time for eating fruit.

In giving dinners avoid ostentation, which will not only be very expensive, but will make your guests uncomfortable. Again, it is not merely the expense, but the trouble and fuss of dinner-giving on the extravagant system that check the extended practice of giving parties, and impose a restraint upon sociable enjoyment.

Having given our observations on giving parties, we will now submit those of M. Ude, who is a great authority on the subject.

"My plan," writes that distinguished *artiste,* "for a party, is to ornament the sideboard with a basket of fruit, instead of insignificant pieces of pastry, which are at once expensive in making, and objects of ridicule to the connoisseur. Place in their stead things that can be *eaten,* such as jelly, plates of mixed pastry, and sandwiches of a superior kind; and if the founder of the feast be great and generous, avail yourself of his generosity, and make excellent articles, but never in too great profusion. The chief fault of all cooks is, that they are

too profuse in their preparations. Take care not to load the sideboard with anything but dishes, agreeably but simply prepared. The lovers of good cheer do not like objects which present a *handled* appearance. Affix a label to each plate, indicating its contents, and you will find that this arrangement will give the guests an opportunity of taking refreshments without being obliged to seat themselves, at a table from whence the ladies cannot rise without disordering their dresses, which, to them, is a matter of far greater moment than the best supper in the world!

"For a simple *soirée* I recommend some sandwiches of fowl, of ham, of veal, of tongue, &c.; some plates of pastry; and, here and there on the table, some baskets of fruit. These, judiciously arranged with the lights, will present an agreeable *coup-d'œil*, and will cost less, by three-fourths, than a very common supper, where the guests are required to set to work in carving pâtes, hams, fowls, &c.; while at a *buffet* furnished as above, neither ladies nor gentlemen need remove their gloves, and can, notwithstanding, satisfy themselves in every way.

"For a select party, I would have more variety in the composition of the articles. Put on the sideboard, in the first place, sandwiches of fowl, fillets of soles, and anchovies for those who happen to like them. All these things, made with great care, have many admirers; and I am confident that, if it were once customary to adopt them generally, they would never again give place to those ancient suppers which are only ridiculous signs of the extravagance and bad taste of the givers."

As dulness is less tolerable at one's own table than at any other, care should be taken in the selection of the party, which cannot be otherwise than heavy and dull if incongruously assembled. A large party is not likely to be as lively and sociable as one of moderate size. When a table is very long, the conversation, witticisms, and pleasantries at one end must be lost at the other.

The extent of a party being determined, the next point to be considered is the selection of the guests. It is fatal to good humour and enjoyment to invite those to meet who are known to be disagreeable to each other. The lively and reserved should be mixed together, so as to form an agreeable whole, the one amusing, and the other being amused. An equal number of ladies and gentlemen, neither all old nor yet all young, should be so mingled that the conversation may be as varied as the party, uniting the sense and the experience of age with the vivacity and originality of youth. The conversation must, in a great degree, however, be regulated by the host and hostess, who should always be prepared to rouse it when it becomes heavy, or to change it skilfully when it is likely to turn upon subjects known to be unpleasant to any of their visitors. Such a power over the flow of conversation results generally from early and constant association with good company, and from that self-possession which rarely belongs to persons of retired habits. Sir Walter Scott possessed the art in a peculiar degree, and exerted it whenever the conversation approached towards an argument between two of the party. By imperceptible, but sure means, he checked this monopoly, and turned the conversation into channels of more general interest.

Every lady must exercise her judgment before giving a party, as to the expense of it, and then show her taste in its arrangement, whatever her establishment may be—whether she have to fix upon her bill of fare with a housekeeper, or with a cook of fewer qualifications, her superintendence will still be necessary.

Passing Bell.—It is so called because the defunct has *passed* from one state to another, and owes its origin to an idea of sanctity attached to bells by the early Romanists, who believed that the sound of these holy instruments of percussion actually drove the evil spirit away from the soul of the departed Christian. Durand, who lived about the end of the twelfth century, tells us in his "Rationale," "When any one is dying, bells must be tolled, that the people may put up their prayers; twice for a woman and thrice for a man; if for a clergyman,

as many times as he had orders, and at the conclusion, a peal on all the bells, to distinguish the quality of the person for whom the people are to put up their prayers. A bell, too, must be rung when the corpse is conducted to church, and during the bringing it out of the church to the grave." Shakespeare, in one of his poems, says:—

"Come list and hark, the bell doth toll
For some but now departing soul,
Whom even now those ominous fowle,
The bat, the night-jar, or screech-owl
Lament; hark! I hear the white wolfe howle,
In this black night that seems to scowle,
All these my black book shall enscrole,
For hark! still, still the bell doth toll
For some but now departing soul.

Paste, To Make.—Paste is usually made by rubbing up flour with cold water and boiling; if a little alum is mixed before boiling it will be improved, being less clammy, working more freely in the brush, and thinner, a less quantity is required, and it is therefore stronger. If required in a large quantity, as for papering rooms, it may be made by mixing one quartern of flour, one quarter pound of alum, and a little warm water; when mixed, the requisite quantity of boiling water should be poured on whilst the mixture is being stirred. Paste is only adapted to cementing paper; when used it should be spread on one side of the paper, which should then be folded with the pasted side inwards, and allowed to remain a few minutes before being opened and used; this swells the paper, and permits its being more smoothly and securely attached. Kept for a few days, paste becomes mouldy, and after a short time putrid; this inconvenience may be obviated by the use of—Permanent paste, made by adding to each half-pint of the flour-paste without alum, fifteen grains of corrosive sublimate, previously rubbed to powder in a mortar, the whole to be well mixed; this, if prevented from drying, by being kept in a covered pot, remains good any length of time, and is therefore convenient; but unfortunately it is extremely *poisonous*, though its excessively nauseous taste would prevent its being swallowed accidentally; it possesses the great advantage of not being liable to the attacks of insects.

Or—Take four ounces of wheat flour and a gill of cold water, stir well, and pour the mixture into a pint of hot water, to which you have previously added a quarter of an ounce of alum; stir over a brisk fire until it comes to a boiling point, straining it afterwards if lumpy. This is the best application for sticking labels to glass (which *see*), bottles, &c., as it does not show through when dry.

Patching, The Art of.—This is an operation requiring far more skill than does the making of a new garment, and, when well executed, may save the purchase of many a costly one; the most expensive robe may by an accident be torn or spotted the first day of its wear; the piece inserted in lieu of the damaged one is a patch. If a figured material, the pattern has to be exactly matched; in all cases the insertion must be made without pucker, and the kind of seam to be such as, though strong, will be least apparent; the corners must be turned with neatness. Is not this an art which requires teaching?

So of darning, much instruction is necessary as to the number of threads to be left by the needle according to the kind of fabric; then there is the kind of thread or yarn most suitable, which requires experience to determine. Where the article is coarse, the chief attention is directed to expedition; but a costly article of embroidery on muslin can only be well darned with ravellings of a similar muslin; such particulars do not come to the girl by inspiration, they must be taught, or left to be acquired by dearly-bought experience.

The third mode of repair is well understood and practised by our continental neighbours, though rarely in this country. The stocking-stitch is neither more difficult nor tedious than the darn, yet how many pairs of stockings are lost for want of knowing it when a hole happens to be above shoe?

Practice in lace stitches is still more desirable, particularly for repairing lace of the more costly descriptions. The deficiency of a single loop, when lace is sent to be washed, often becomes a large

hole during the operation, and thus the beauty of the lace is destroyed. Indeed, lace, when duly mended, on the appearance of even the smallest crack, may, with trouble, be made to last twice or thrice the usual term of its duration.

So the shawl-stitch is not sufficiently taught, though by employing it with ravellings from the shawl itself, the most costly Cashmere can be repaired without a possibility of discovering the inserted part. Proficiency in such useful works might well merit as much approbation as is now bestowed upon crochet or other fancy works, and might be considered as equally desirable qualifications in a tradesman's governess or daughter as music. In populous places it might well answer to establish schools where the art of mending apparel would be the chief object of instruction; a month or two spent in it might be sufficient for the damsel, already a good plain needle-worker. We hope the art of patching will not be overlooked in the schools set afloat by the new School Board.

It must further be observed, that without a practical knowledge of needlework, no young lady can judge whether her servant has or has not done a reasonable quantity of it in a given time; and if this be true as to the plain seam, it is still more essential in regard to mending and patching of all kinds. (See *Needlework.*)

"Paying through the Nose."—The following, from a German authority, is the origin of this common saying:—Odin laid a nose-tax on every Swede, a penny a nose. Those not able to pay the tax forfeited "the prominence on the face, which is the organ of scent, and the emunctory of the brain," as good Walker says. Still we "count," or "tell noses," when computing, for instance, how many persons of the company are to pay the reckoning. The expression is used in England as well as in Holland. Tax money was gathered into a brass shield, and the jingling (*schel*) noise it produced gave to the pieces of silver exacted the name of *schellengen* (shillings).

Pepper.—See *Adulterations.*

Perch.—This is a very bold-biting fish, and affords excellent amusement to the angler. It is distinguished by the beauty of its colours, and by a large erection on its back, strongly armed with stiff and sharp bristles, which can be raised or depressed at pleasure. Defended by this natural excrescence, the perch bids defiance to the attacks of the ravenous and enormous pike, and will even dare to attack one of his own species. Perch spawn about the beginning of March, and increase from eight to fourteen inches in length. In fishing for perch with a minnow, the hook should be run through the back fins of the bait, which must hang about six inches from the ground. A large cork float should be attached to the line, which should be leaded about nine inches from the hook. It should be observed that they invariably refuse a fly. (See *Flies, Hooks, &c.*)

Perfumery.—Much aid has been given to perfumery by chemists. It is true that soap and perfumery are rather rivals, the increase of the former diminishing the use of the latter. Costly perfumes, formerly employed as a mask to want of cleanliness, are less required now that soap has become a type of civilization.

The jury in the Exhibition of 1851, or rather two distinguished chemists of that jury, Dr. Hoffman and Dr. De la Rue, ascertained that some of the most delicate perfumes were made by chemical artifice, and not, as of old, by distilling them from flowers. The perfume of flowers often consists of oils and ethers, which the chemist can compound artificially in his laboratory. Commercial enterprise has availed itself of that fact, and sent to the Exhibition in the form of essences, perfumes thus prepared. Singularly enough, they are generally derived from substances of intensely disgusting odour. A peculiarly fetid oil, termed "fusel oil" is formed in making brandy and whisky. This fusel oil, distilled with sulphuric acid and acetate of potash, gives the oil of pears. The oil of pine-apples is obtained from a product of the action of putrid cheese or sugar, or by making a soap with butter and distilling it with alcohol and sulphuric acid, and is now largely employed in England in the preparation of the pine-apple ale. The oil

of apples is made from the same fusel oil, by distillation with sulphuric acid and bichromate of potash. Oil of grapes and oil of cognac, used to impart the flavour of French cognac to British brandy, are little else than fusel oil. The artificial oil of bitter almonds, now so largely employed in perfuming soap and flavouring confectionery, is prepared by the action of nitric acid on the fetid oils of gas tar. Many a fair forehead is damped with eau-de-millefleurs, without knowing that its essential ingredient is derived from the drainage of cow-houses.

All these are direct modern appliances of science to an industrial purpose, and imply an acquaintance with the highest investigations of organic chemistry. The oil of lemons, oil of juniper, oil of roses, oil of rosemary, and many other oils, are identical in composition, and it is not difficult to conceive that perfumery may derive still further aid from chemistry.

Perfumes, Utility of.—The odours we dislike are sometimes overpowered by others more agreeable; but they are neither removed nor destroyed; and invalids continue to inhale them in spite of their injurious effects. The best means of removing a bad odour from a room is by proper ventilation. A fire in the grate, and a door left ajar, or the window open at the top and bottom about an inch, will quickly change the atmosphere in the apartment; the vitiated air will flow up the flue, while fresh air will come in at the openings. There are cases, however, where the doctor and the nurse positively prohibit a draught, as certain death to the patient. It is on such occasions that the proper use of fragrant substances is beneficial, not only because they hide the bad odour, but act as a prophylactic in the atmosphere. The odorous substance of flowers is antiseptic in a high degree, and being diffused in an atmosphere charged with malarious gases, destroys their poisonous effects. Fresh air, however, is the best physic for an invalid.

Permanent Paste.—See *Paste.*

Perspiration.—See *Exercise.*

Physiognomy.—See *Foreheads, Physiognomy of.*

Physicians' Characters.—R. recipe, take; à, àà, or ana, of each the same quantity; ss, signifies the half of anything; cong. *congius,* a gallon; coch. *cochleare,* a spoonful; M. *manipulus,* a handful; P. *pugil,* as much as can be taken between the thumb and forefingers; q. s., a sufficient quantity.

Pianoforte, Management of a.—A piano should be tuned at least four times in the year by an experienced tuner. If you allow it to go too long without tuning, it usually becomes flat, and troubles a tuner to get it to stay at concert pitch, especially in the country. Never place the instrument against an outside wall, or in a cold, damp room, particularly in a country-house. There is no greater enemy to a pianoforte than damp. Close the instrument immediately after your practice; by leaving it open, dust fixes on the sound-board, and corrodes the movements, and if in a damp room, the strings soon rust. Should the piano stand near or opposite to a window, guard, if possible, against it being opened, especially on a wet or damp day; and when the sun is on the window, draw the blind down. Avoid putting metallic or other articles on or in the piano; such things frequently cause unpleasant vibrations, and sometimes injure the instrument. The more equal the temperature of the room, the better the piano will stand in tune.

Pianists, Advice to.—A player may cram his memory with fine passages; they all, in time, grow commonplace, and must be changed. Only where such facility serves higher ends, is it of any worth. Play nothing, as you grow older, which is merely fashionable. Time is precious. One must have a hundred human lives if he would acquaint himself with all that is good. You must carry it so far that you can understand a piece of music on paper. Strive to play easy pieces well and beautifully; it is better than to render harder pieces only indifferently well. You should sedulously practise scales, and other finger exercises. But there are many persons who imagine they

have accomplished everything when they have spent many hours each day for years in mere mechanical exercise. It is about as foolish as if one should busy himself daily with repeating the A B C as fast as possible, and always faster and faster. Use your time better.

Accustom yourself, even though you have but little voice, to sing at sight without the aid of an instrument. The sharpness of your hearing will continually improve by that means. But if you are the possessor of a rich voice, lose not a moment's time, but cultivate it, and consider it the finest gift which Heaven has sent you. You must not only be able to play little pieces with the fingers; you must be able to hum them over without a piano. Sharpen your imagination so that you may fix in your mind not only the melody of a composition, but also the harmony belonging to it.

The cultivation of hearing is the most important matter. Take pains early to distinguish tones and keys by the ear. The bell, the window-pane, the cuckoo—ask yourself what tones they each give out.

Pickles.—See *Adulterations*.

Pictures, Nursery, To Preserve.—Pictures are an almost endless source of amusement to children, and as a great variety may now be had at a trifling cost, there are but few families where some are not to be found. There are, perhaps, as few families where vexation has not been experienced in finding how soon the mere paper pictures are torn. A simple plan, by which children may use them for years without tearing, is to paste them on to cheap calico, or the better part of worn-out calico garments will do just as well. Rub with a little smooth flour paste the back of the picture and the calico on which it is to be put, then lay the picture quite smooth upon the calico, and leave it to gradually dry; when quite dry, neatly cut round the edges, and the engraving will bear all the hard treatment children are likely to give it without being torn. Parents who have not tried this method would be surprised what a fund of amusement they might inexpensively acquire for their children, if they would so serve every picture that comes in their way, and provide a box or portfolio for their reception. When, however, we say every picture, we must be understood, of course, to mean, every picture that is worthy of preservation.

Pictures, To Clean and Restore.—In cleaning and restoring a picture the first thing which must be attended to is to flatten the plane of the picture by stretching it; or, if the painting is broken in parts, it must be lined, which is quite a business of itself, and, being mechanical, has been carried to great perfection. "When a painting," says Mr. Watkins, "has on its surface merely dirt, it is to be got off very easily by washing it with water and a soft piece of leather; then rub the picture with your fingers' ends, and if the varnish is *mastic*, the surface of the picture and your fingers will be covered with a white and resinous dust. This process requires some labour, but it is a very safe one. If the picture has been varnished with *copal*, that varnish being hard, it requires a different treatment, such as rubbing it with india-rubber, it being elastic and of a nature which the varnish, as it is being rubbed, adheres to and is removed quickly; some prefer india-rubber to the fingers' ends; sea or river sand is very useful in cleaning, the particles of the sand being round preventing their scratching. If the latter process will not get the varnish off, a very good mode of cleaning is to use spirits of wine mixed with turpentine, applying it with a brush over the pictures; and when it has softened the varnish, take another brush with oil in it, and apply it over the part, and so work on until the varnish is removed. It is the best way to clean a picture by bits, so that you will not go too far with the cleaning without seeing the contrast. After this process the picture is cleaned; then comes the restoring. In restoring a picture which has been cleaned, it is first necessary, if the canvas is broken, to fill in those parts before commencing restoring. I have found the following mixture answer the purpose very well: obtain some flake white in powder, mix it with japanners' gold size,

and fill in the broken parts with it. The gold size dries hard and firm. It can then be rubbed down to the surface of the picture by pumice-stone. The surface now even, the next process is to restore the decayed parts; and to be able to see the full effect of the picture and bring out the darks, so as to know the exact tone, is to thinly rub your brush with varnish on it over the picture; and in restoring do not have your brush full of colour, as in painting, but nearly empty, using no more paint than is just necessary to touch up the damaged places, and, by gradually working, an artist can get the parts so near to the original colour as to defy detection. A good eye for colour is very essential in restoring, for the parts restored must match exactly, and where form is required it also stands to reason the operator ought to have a good knowledge of drawing, otherwise a connoisseur in art will detect it immediately."

Pie Juice.—Some people place an inverted cup in the pie, thinking this catches juice that would otherwise boil over, but that is a mistake; for, though juice is found under the cup when the pie has cooled, yet it never entered the cup when the pie was in the oven, for this simple reason: the inside of the cup was as hot as the inside of the pie. The case of inverting a cup in the pie does more harm than good; for as the heat cooks the fruit, it also expands the air in the cup, which tends to blow out the juice from the dish. But if a small hole, say a quarter of an inch in diameter, be made at the bottom of the cup, which, of course, comes to the top of the pie when inverted in the dish, the hot air will escape into the oven, and leave room for the juice to run into the cup, which will again descend amongst the fruit, on the pie cooling. "Now, how are we to make this small hole in the bottom of the cup?" asks the reader. Take a six-inch flower-pot; fill it with dry sand or mould; then take your cup, invert it, and push it down into the mould or sand, till only the top is just seen—by which means the inside of the cup is as full of sand or mould as it will be of juice when in the pie; then take a sharp-pointed instrument, like an old pair of scissors, or a one-pronged fork, and begin to peck away, little by little, and you will soon have a small hole, which can easily then be made bigger before taking the cup from the flower-pot. The sand or mould prevents the cup cracking or breaking during the chipping process. When the cup is used, invert it in the pie, but take care that the small hole is free from the crust. Here is a very simple contrivance that will soon prove itself:—A good plan is to make three pies—one without any cup, one with a cup, and one with a cup with a hole in—then you can see the difference.

Pigeons, About.—This extremely beautiful race of birds has been held in high estimation, both in ancient and modern times, as well for the pleasing amusement they afford as from the profit to be derived from them. Those who keep pigeons must feed them regularly and abundantly, a plan which so attaches them to their home, that it is often difficult to get them to fly abroad for air and exercise, but entirely prevents those frequent losses, from straying and by robbery, to which those who allow their pigeons to pilfer their neighbours' produce are so constantly subject.

Pigeon-House.—When many pigeons are to be kept, the best place is an empty chamber, or garret, which is warm and dry, and where they can be open to observation. The space between the roof of a house and the ceiling of the upper chamber may be very well appropriated for this purpose. An opening should be made through the tiles or slates, for the going in and out of the birds, and have a covering resembling a dormer or garret window, in order to keep the wet out. This outlet should, if possible, face the south or south-east; and be well sheltered from cold, from high winds, and heavy rains,—because, if much exposed to the weather, the growth of the young pigeons is delayed, and the health of the older ones sensibly affected.

Around the interior of the loft a row of compartments for the pigeons must be fixed at any convenient height. Shelves, placed one above another, at eighteen inches apart, and divided by

partitions placed at the same distance from each other, then boarded up in front, leaving outlets for the pigeons, is the simplest plan that can be adopted. Any boy, with a little ingenuity, will be able to construct these apartments, as it is not necessary that any fixed plan should be followed; only care should be taken to allow height enough for fancy breeds, if they are kept; eighteen inches will be quite sufficient for that purpose.

NESTS.—Each pair of pigeons should have two nests, closely adjoining, yet separated from each other by a partition —for good breeders generally, at the same time they have young to attend to, have also eggs to hatch; and, where there is no separation between the nests, the hen, while sitting, may be annoyed by the young birds, and compelled to quit her nest, and the eggs be broken or addled.

The pigeon lays two eggs, and then sits. The eggs are hatched nearly at the same time, as she does not sit closely upon the first egg until the second is laid. The nest is of the rudest possible construction—a few sticks or straws, laid across each other, generally serve the purpose; often, indeed, pigeons do not take the trouble to make a nest at all, but lay their eggs upon the flat surface of the floor of their nests, in which case the eggs do not lie closely together during the process of incubation, but are in danger of being broken by rolling on the ground. In Germany, to prevent this, nests are provided made of straw, something like the top of a bee-hive turned upside down; the eggs naturally roll together at the bottom, and receive equal warmth while hatching.

FOOD AND WATER.—Tares or small horse-beans, called "pigeon-beans," form the best, as well as the cheapest food for these birds; but peas, both grey and white, barley, wheat, hemp and rape seeds, may be occasionally given with advantage. The food, of whatever kind, should be supplied twice a day, early in the morning and in the afternoon. On each occasion just as much as they can eat should be given, so that there may be no waste by the scattering about of the grain, which is the case when a supply is always kept on the floor of the pigeon-house.

A constant supply of fresh water must be provided, not only for drink, but also that the pigeons may bathe themselves, which they frequently have occasion to do, in order to rid themselves of vermin. A large earthen pan will answer for both purposes, but the water must be often changed.

The door of the pigeon-house should be strewed with fine gravel, which is as necessary and beneficial to the health of pigeons as it is to fowls. Pigeons are very fond of salt, and for this reason the "salt cat" is often introduced into the house; not a real pussy, but a composition of the following materials. About a gallon each of gravel, earth, and old mortar from walls, half a pound each of carraway, hemp and mustard seeds, two or three ounces of bay salt; all to be well mixed with strong lime, and then baked in a pan, as a cake or pudding. When sufficiently dried, and become cold, it is to be placed upon the floor of the pigeon-house, where it will afford a constant source of enjoyment to the pigeons in picking out the seeds, besides contributing to keep them in health.

Apart from the question of gain (and we do not think there is much to be derived) from keeping pigeons, we entirely concur with a popular writer on this subject; he says, "Pigeons are of this use; they are very pretty creatures; very interesting in their manners; they are an object of delight to children, and to give them the early habit of fondness for animals, and of setting a value on them, is a great thing.

We have fourteen different varieties of the pigeon in England—Fantails, Trumpeters, Archangels, Pouters, Carriers, Lace Pigeons, Frizzled pigeons, Tarbits, Runts, Nuns, Jacobins, Bald Pates, Barbs, and Tumblers. To say which of these is the most advisable sort of pigeon to keep is no easy task, for tastes so much differ. Nuns and archangels are to be recommended for their beauty, tumblers for their performances, and fantails for their oddity. If handsome,

court-yard table-birds are desired, we recommend the larger breeds, such as runts and trumpeters. The great bulk of these birds makes them imposing ornaments to the aviary.

The nun, perhaps, is the prettiest and most striking of the toy pigeons. "The most beautiful specimens of nuns," says Temminck, "are those which are black, but have the quill feathers and the head white." But these black nuns are of great rarity. Their colouring is various, but in almost all cases the body is white, while the small bill and pearl eye of this bird add to the neatness of its appearance.

Pigeon Soup.—Take eight pigeons, cut up two of the worst, and put them on the fire with as much water as will make a large tureen of soup, adding the pinions, necks, gizzards, and livers of the others; boil well, and strain. Season the whole pigeons within with mixed spices and salt, and truss them with their legs into their belly. Take a large handful of parsley, young onions and spinach; pick and wash them clean, and shred small; then take a handful of grated bread, put a lump of butter about the size of a hen's egg in a frying-pan, and when it boils, throw in the bread, stirring well until it becomes a fine brown colour. Put on the stock to boil, and the whole pigeons, herbs, and fried bread, and, when the pigeons are done enough, dish up with the soup.

Pike, Luce, or Jack.—By these different names this enormous fish is known. They are of the greatest voracity, indeed, so notorious are pike for this quality, as to have gained the appellation of the fresh-water shark. They are also great breeders. Their usual time of shedding their spawn is about March, in extremely shallow waters. The finest pike are those which feed in clear rivers; those of fens or meres being of very inferior quality. They grow to a vast size in these last-mentioned places, where they feed principally on frogs, and such like nutriment. They are reckoned to be the most remarkable for longevity of all fresh-water fish; are solitary and melancholy in their habits, generally swimming by themselves, and remaining alone in their haunts, until compelled by hunger to roam in quest of food. There are three modes of catching pike: by the ledger, the trolling, or walking bait and the trimmer. (See *Hooks and Flies*.)

Pillow-Lace Making.—There are few hand-wrought fabrics which look more beautiful than the delicate and cunningly-wrought lace, which was the pride of our ancestors of both sexes, and which seems to have reached its greatest state of perfection in the reign of Charles I., when marvellous prices were paid for this elegant personal decoration. When looking at the intricate patterns of both old and modern lace, we have been puzzled to know by what magic it had been produced, and were glad to have the opportunity on a visit in Bedfordshire to witness the process.

The pillow-lace is so called in consequence of being made on a pillow, or cushion. These cushions are generally of rich and harmonious colours, and form a foil to the "greenery" which is generally near. The neat dresses of the lace-makers, old and young, and the fanciful designs and ornaments on the bobbins, are also pleasant to the eye.

On the pillow, which is stuffed with straw and raised to a convenient height on a wooden frame, the pattern of the lace is pounced through parchment, in the same way as the card sheets formerly so much used for stencilling rooms. This pattern is generally about the third of a yard long, and on the quality of the design the beauty of the lace depends. The thread used is of considerable fineness and strength. The material is wound in proper quantities by a simple machine on the upper part of fifty or sixty bobbins, which are about the length and thickness of uncut blacklead pencils. At the end opposite to that on which the thread is wound are rings strung with glass beads of various colours, and in some instances old silver coins and other simple keepsakes. These matters are needed to give weight to the bobbins, and to cause them to move with ease and precision. Great fancy is shown in these lace-making tools. The bobbins used by one old lady had belonged to her grandmother, and

were probably as old as the reign of Queen Anne. Some of these were elaborately carved, turned, and decorated with silver and gold. Some, again, were of ivory; one was the gift of a "dear Robert," long since buried. Each of the numerous bobbins seemed to have attached to it some cherished memory of the past.

The bobbins being properly charged with thread, the ends are joined and fixed to the top of the cushion in the centre of the upper part of the parchment pattern. Here is also fixed a case thickly stuck with very small pins, which, as the work goes on, are placed in the interstices of the pattern cut in the parchment. Round the pins, when rightly fixed, the thread is thrown and woven together by the bobbins, which are moved by both hands with remarkable quickness.

Although hand-lace weaving does not, after the pattern is prepared, require much artistic or mental ability, it needs great care, patience, and much practice to follow up the pattern, and leave in the proper places the different degrees of thickness of thread. The process is very slow, and, during upwards of an hour that we watched the progress of a worker, not more than three-quarters of an inch in breadth was completed. It takes about four days close work to complete one yard in length. The sum paid for this is about 1*s.* 8*d.*, and the thread has to be paid out of it.

In the country a number of those who practice lace-making do so as a means of occupying spare time, and do not depend on it for a living, the young girls having in view the purchase of a new frock, or bonnet. In those districts, however, where lace-making is made a trade of by large numbers, children were put to it at the early age of five years; and, as is the case with most other departments of labour which can be soon learnt by young persons, the prices have declined. Forty years ago a young person could earn a shilling a day by this employment; a similar person will now, with difficulty earn fourpence a day.

Pillow-lace has a rich and artistic appearance and texture, which is not to be equalled by other means; but the imitation is cheap, looks well at a distance, and is in progress of improvement; so that, in all probability, the operation of lace-making will, like the spinning-wheel, and other matters once so familiar, soon become a thing of the past.

Pimento.—See *Adulterations.*

Plant Houses and Frames, Fumigation of.—Provide a strong solution of nitre and water, in which soak some sheets of strong brown paper, and afterwards dry it slowly, and cut into lengths of convenient size, the largest eighteen inches by twelve inches. Then get some strong tobacco, and strew it thinly over the paper, and with a coarse pepper-box, dredge in a good coat of cayenne pepper; wrap the whole up rather loosely like a cigarette; paste the end over, and when dry it is fit for use. Two or three of these suspended by a wire under a greenhouse stage, and lighted at each end, will quickly settle the accounts of the green-fly and thrip, and that with comparatively little trouble. Indeed, if a quantity of these cigarettes are kept ready made, a few plants may be put into a pit or small room, and be cleaned, at least have their insect pests destroyed, in a very short time. By using cayenne, much less tobacco is required, and the effect of the two combined is most deadly, for as the cigarettes will burn for a considerable time, say an hour or more, it is impossible for insects to live in an atmosphere so thoroughly impregnated with the elements of suffocation. This experiment has been tested with cigarettes against tobacco paper, and three plant-houses, each about thirty feet long, were effectually fumigated with eight ounces of tobacco, two ounces of cayenne, and about four sheets of brown paper, with a handful of damp hay to make a smoke. The expense was three shillings. The same houses had required before, seven pounds of tobacco paper, at an expense of ten shillings and sixpence.

Plants in Rooms, Care of.—The reason why plants fade so soon in rooms is because due attention is not paid to them. The mere supplying them with water is not sufficient. The leaves should be kept perfectly clean. "If as

much washing were bestowed in London," says Dr. Lindley, "upon a pet plant as upon a lap-dog, the one would remain in as good condition as the other. The reasons are obvious. Plants breathe by their leaves, and if the surface of the leaves is clogged by dirt, of whatever kind, their breathing is impeded or prevented. Plants perspire by their leaves, and dirt prevents their perspiration. Plants feed by their leaves, and dirt prevents their feeding. So that breathing, perspiration, and food are fatally interrupted by the accumulation of foreign matters upon leaves. Let any one, after reading this, cast an eye upon the state of plants in sitting-rooms or well-kept greenhouses; let him draw a white handkerchief over the surface of such plants, or a piece of smooth white leather, if he desire to know how far they are from being as clean as their nature requires."

Plants, Leaves, &c., To Take Impressions of.—Take half a sheet of fine wove paper, and oil it well with sweet oil. After it has stood two minutes, to let it soak through, rub off the superfluous oil with a piece of paper, and let it hang in the air to dry. After the oil is pretty well dried in, take a lighted candle and move the paper over it, in a horizontal direction, so as to touch the flame, till it is perfectly black. When you wish to take off impressions of plants, lay your plant carefully on the oiled paper, lay a piece of clean paper over it, and rub it with your fingers equally in all parts for half a minute; then take up your plant, and be careful not to disturb the order of the leaves, and place it on the paper on which you wish to have the impression; then cover it with a piece of blotting paper, and rub it with your finger for a short time, and you will have an impression superior to the finest engraving. The same piece of black paper, should you wish to be economical, will serve to take off a number of impressions.

The principal excellence of this method is, that the paper receives the impression of the most minute veins and hairs, so that you obtain the general character of most flowers. The impressions may afterwards be coloured.

Plants, Migration of.—Plants are seldom motionless. The wind wafts the seed of the dandelion. The waves bear the nut of the cocoa palm. Man has carried the apple and the pear, the apricot and the peach, from the highlands of Asia to the far west. The cereals have spread over all the world, and have become so thoroughly cosmopolite that the land of their birth is unknown. Some plants would almost seem to attach themselves to particular races. The common plantain is called by the North American Indians "The white man's footsteps." Currents of air carry the seeds and the eggs of insects and infusoria. To settle this formerly-disputed question, the German philosopher Unger placed several plates of glass, carefully cleaned, between the almost air-tight double sashes with which he protected his study against the rigours of a fierce northern climate. Six months later he took them out and examined the dust that had fallen on them through imperceptible cracks and crevices with a microscope. The result was, that he discovered in the apparently inorganic dust the pollen of eight distinct plants, the eggs of four higher infusoria, and living individuals of at least one genus.

The immense fertility of plants is shown in the following. A single plant may produce—

	No. of. Flowers.		Seeds to each Flower.		Total.
Groundsel	130	×	50	=	6,500
Chickweed	500	×	10	=	5,000
Shepherd's Purse	150	×	30	=	4,500

Plants, New, for Basket Ornaments and Rock Work.—"Having recently had a lot of suspended flower-baskets to arrange and keep in good order with beautiful plants," says Mr. Mackeller, "I had some difficulty in finding those plants that would look best, and at the same time last some considerable period without requiring to be renewed. I had at hand in the garden a good supply of Chinese primulas, sweet-scented and ivy-leaved pelargoniums, dracænas, cinerarias, ferns, centaureas, &c., and such like plants occupy the baskets at present; but I was at a loss to find enough suitable drooping species,

which, for showing off baskets especially, are of great value. In accordance with the object I had in view, I therefore kept observant for some time, and, when out in the grounds one day, I accidentally came upon one, which, I may say, above most others has answered my purpose well. It is, I have no doubt, known to many, being frequently seen in shubberies, on rockwork, and such places; but as an elegant basket plant, to look beautiful and make others around it look still more beautiful, its qualities, I am sure, are not nearly so well known as they should be. It is the *vinca major variegata*, being the variegated form of the common periwinkle—above all a first-rate plant for natural drapery on rockworks, sloping banks, and rugged places. When I took my idea for its use as I describe, I recollected some miserable flower baskets I had seen before suspended in one of the most famous places in the country, and naturally at the time I thought I had found something I could soon turn to good practical account. Without much delay, then, I got a lot of plants lifted, divided, and potted, to be ready for filling the baskets; and now, after a good period of trial, I am able to say that the plants have turned out equal to my first expectations. It is in every respect a first-rate basket plant. Its nicely-formed shoots droop down quite a yard or more, and with its pretty opposite variegated leaves it always looks well. The plant is quite hardy, free-growing, and inexpensive—all real recommendations. Besides these advantages, its young, slender shoots are well adapted for mixing among other cut flowers in glasses in drawing-rooms, being void of stiffness; and it is a most suitable plant for making a beautiful line for a ribbon border."

Plants, Origin of.—The citron is a native of Greece; the pine is a native of America; the poppy originated in the East; oats originated in North Africa; rye came originally from Siberia; parsley was first known in Sardinia; the pear and apple are from Europe; spinach was first cultivated in Arabia; the sun-flower was brought from Peru; the mulberry-tree originated in Persia; the gourd is probably an eastern plant; the cotton-tree is a native of India; the walnut and peach came from Persia; the horse-chestnut is a native of Thibet; the cucumber came from the East Indies; the garden-cress is from Egypt and the East; horse-radish came from the south of Europe; the Zealand flax shows its origin by its name; the coriander grows wild near the Mediterranean; the dyer's weed is peculiar to southern Germany; the Jerusalem artichoke is a Brazilian product; hemp is a native of Persia and the East Indies; the parsnip is supposed to be of Egyptian origin; the cranberry is a native of Europe and America; the potato is a well-known native of Peru and Mexico; the currant and gooseberry came from southern Europe; the onion originated in Egypt; madder came from the East; celery originated in Germany; the nettle is a native of Europe; the cherry, plum, olive, and almond came from Asia Minor; the carrot is supposed to have been brought from Asia; barley was found in the mountains of Himalaya; rice came from southern Africa; wheat was brought from the central table-lands of Thibet; turnips and mangel from the shores of the Mediterranean, and garden-beans from the East Indies.

Plants, Skeleton.—Plants may be dissected, or reduced to skeletons, by decomposing the soft, pulpy matter, and separating it from the woody filaments—alike in leaves, fruits, roots, and even the petals of some plants, which, when they are afterwards bleached and mounted, form elegant, instructive, and useful ornaments for a room.

To Prepare the Skeletons of Leaves, &c.—They should be macerated in water until putrefactive fermentation takes place, when the soft parts are easily separated from the fibrous by washing in fresh water, blowing on them with a pair of bellows, or by letting a small stream of water fall on them. Care must be taken to remove every particle of the soft parts with a fine needle, or a camel-hair pencil; after which, the skeletons are to be washed in fresh water, then with a solution of chloride of soda, or lime, and exposed to the air to bleach. When white enough, they must be washed with

diluted hydrochloric acid (one part of acid to 60 of water), dried and mounted.

They may be prepared by boiling, and by burying them in sand, or common garden earth.

The best leaves to operate on are those of ivy, holly, laurel, lime, medlar, maple, pear, orange, lemon, walnut, willow, butcher's-broom, chestnut, white hawthorn, Indian fig, vine, palm, and oak.

The *petals* of the hydrangea, and others, are beautiful. The *roots* of such plants as the hemlock, the *calyx* of the winter cherry, and the *fruit* of the thorn-apple, pear, &c., when thus prepared, form most beautiful objects.

To Mount them.—Procure a box deep enough to receive them, line it with black cotton velvet, arrange the preparations according to taste, and attach them by means of fine flour paste, or gum-arabic, to the box, which should be fitted to a glazed picture-frame, and papered outside, to exclude the dust.

The leaves are to be put into an earthen or glass vessel, and a large quantity of rain-water to be poured over them; after this, they are to be left to the open air and to the heat of the sun, without covering the vessel. When the water evaporates and the leaves are left dry, more must be added in its place. The leaves will, by this means, putrefy; but they require a different time for this. Some will be finished in a month, others will require two months, or longer, according to the toughness of their parenchyma. When they have been in a state of putrefaction for some time, the two membranes will begin to separate, and the green part of the leaf to become fluid; then the operation of clearing is to be performed.

The leaf is to be put upon a flat, white earthen plate, and covered with clear water, and, being gently squeezed with the finger, the membranes will begin to open, and the green substance will come out at the edges. The membranes must be carefully taken off with the finger, and great caution must be used in separating them near the middle rib. When once there is an opening towards this separation, the whole membrane always follows easily; when both membranes are taken off, the skeleton is finished, and is to be washed clean with water, and then dried between the leaves of a book.

FRUITS are divested of their pulp, and made into skeletons in a different manner. Take, for example, a fine large pear, which is soft, and not tough; let it be neatly pared, without squeezing it, and without injuring either the crown or the stalk; put it into a pot of rain-water, covered, set it over the fire, and let it boil gently till perfectly soft; then take it out, and lay it in a dish filled with cold water; then, holding it by the stalk with one hand, rub off as much of the pulp as you can with the finger and thumb, beginning at the stalk, and rubbing it regularly towards the crown. The fibres are most tender towards the extremities, and therefore to be treated with great care there. When the pulp has thus been cleared pretty well off, the point of a fine penknife may be of use to pick away the stalk sticking to the core. In order to see how the operation advances, the soiled water must be thrown away from time to time, and clean poured on in its place. When the pulp is in this manner perfectly separated, the clean skeleton is to be preserved in spirits of wine.

This method may be pursued with the bark of trees, and affords interesting views of their constituent fibres.

Plants, STUDY OF THE HABITS OF.—There is no skill required to grow a plant fast; exciting compost and plenty of room, with a slight rise of temperature, will always do this. Such, however, has been the taste of prize awarders, that merit has been ascribed according to feet and inches, instead of compactness, gracefulness, and beauty. The faster a plant grows, the further the leaves are apart, the more stem there is bare, the more distant the lateral branches, and the more gawky the specimen. We do not say that plants ought to be stunted; the skill of the gardener is shown in producing a plant of the best form that can be grown. Richness in foliage can never be attained when the number of leaves that should occupy a foot are stretched out to a yard, and when the quantity of bloom that should grace a specimen of two feet high is sprinkled

over two yards of half-naked stalks. Slow growth is to be attained by omitting some or all of the exciting compost, keeping lower temperature, especially at nights, and giving abundance of air whenever it can be done safely—avoiding, in all cases, artificial heat for greenhouse plants, giving plenty of light, and being rather careful of water.

Plaster Figures, To Give them the Appearance of Marble, and to Varnish.—Dissolve one ounce of pure curd soap, grated, in four ounces of water, in a glazed earthen vessel; add one ounce of white wax, cut in thin slices. When the whole is incorporated, it is fit for use. Having dried the figure before the fire, suspend it by a string, and dip it in the mixture; when it has absorbed the varnish, dip it a second time, and that generally suffices; cover it carefully from the dust for a week; then rub it gently with soft cotton-wool, and you will have a brilliant shining gloss, resembling polished marble.

To *varnish* plaster figures, take half an ounce of tin, half an ounce of bismuth; melt in a crucible; then add half an ounce of mercury. When perfectly combined, remove the mixture from the fire, and let it cool. Mix with the white of an egg, and it forms a beautiful varnish. The figure to be dipped in it, and polished when dry. (See *Leaves and Flowers.*)

Plate, Test for.—The following process for testing the genuineness of silver plating on metals may be of value to many. The metallic surface is carefully cleaned, and a drop of a cold, saturated solution of bichromate of potash, in nitric acid, is placed upon it, and immediately washed off with cold water. If silver, a blood-red spot of chromate of silver is formed; on German-silver or Britannia-metal, the stain is brown or black.

Poisoning, Hints in Cases of.—When poisons have been swallowed, two important objects should, if possible, be attained—first, the removal of as much as possible of the poison, by purging or vomiting; second, the decomposition of the remaining portion by an appropriate antidote. In every case of poisoning, there are two stages; in the first, the poison just taken has, as yet, acted but partially; in the second, being taken, or received into the system, it produces a general disturbance. Antidotes are used only in the first stage. For the second, the general disease requires the practitioner's attention. Poisons may be divided into three classes—irritants, narcotics, and narcotic acrid poisons.

Irritant.	Antidotes.
Arsenic ...	An emetic, made by mixing a table spoonful of mustard in a tumbler of warm water; after which give milk, or olive oil, or linseed tea.
Oxalic acid, oil of vitriol, or aqua fortis... ...	Require the administration of lime or magnesia, in water; in the absence of these, the plaster of the apartment, beaten down and made into a thin paste; soap-suds and oily matters.
Corrosive sublimate	Give large quantities of the white of raw eggs in water; or milk, if eggs cannot be procured.
Caustic, or nitrate of silver	Salt and water.
Phosphorus	Magnesia with water. Mucilaginous drinks.
Narcotic.	
Opium or laudanum	Mustard emetic, as for arsenic; constantly rouse the patient, by dragging him about, and dashing cold water on his head and breast.
Prussic acid or laurel water ...	Dash cold water freely on the head and face, and give the mustard emetic, and brandy and water.
Narcotic Acrid.	
Nux vomica, poisonous mushrooms or fish (as mussel)..	The mustard emetic as for arsenic; and then administer freely strong lemonade, or vinegar and water, or other acidulous drinks; warm bath and mustard poultices over the stomach.

Bite of a dog, or poisonous snakes; sting of a scorpion, bee, or wasp: apply a ligature, moderately tight, above the injured part, allowing the wound to bleed. After bathing and fomenting it well with warm water, apply either caustic or butter of antimony; afterwards cover it, with lint, dipped in olive oil and hartshorn. To the patient, well covered in bed, give, so as to cause perspiration, warm drinks and small doses of ammonia, or a little warm wine occasionally. With respect to the sting of poisonous insects, hartshorn and oil should be rubbed on the part affected, and a rag, moistened with the same, or salt and water, should be kept on till the pain is removed.

Poisons, Field, and Garden.—There are the buttercups to begin with, so caustic that the hands of children gathering them are sometimes inflamed, or even blistered. The deep colour of butter was ascribed to the eating of these flowers by the cows, wherefore they were called butter-flowers and buttercups; but the cows knew better than to eat them. The poisonous principle in buttercups is volatile, and disappears out of the herb in drying. Buttercups, therefore, are not only harmless when mixed with the grass in making hay, but even help to make the fodder nutritive by the large quantity of the nutriment their stems contain.

It may be thought that we are safe among the legumes, but we are not; we may eat beans and peas, but we had better avoid eating laburnum. The poisonous principle of the laburnum, cytisine, is contained in some other leguminous plants. In the laburnum it kills easily. Three little children in Herefordshire, finding that a high wind had shaken down a great many laburnum pods, collected them in play, and ate the seeds as peas. They died the same night in convulsions. There is much poison also in laburnum bark.

The seeds of the yellow and of the rough-podded vetching may produce sickness and headache.

The wild flower of the cucumber tribe, common in England, bryony, is a powerful and highly irritant purgative. It is a quack herb medicine; its red berries produce very ill effects on children who may chance to eat them.

In the parsley tribe there are some familiar wild flowers, very apt to be eaten and very far from eatable. Carrots and parsnips, celery and fennel belong to this tribe, and they are good to eat, of course, but there are other plants of this kind, which careless people may mistake for parsley, celery, or parsnips, and die of the blunder. Hemlock leaves have been mistaken for parsley leaves, although very much darker and more glossy. Cows and goats will not eat hemlock, but sheep eat it unharmed. It kills man, when taken in a large dose, by its strong action on the nerves, producing insensibility, and palsy of the arms and legs. As a drug it is most dangerous, except in skilful hands.

Then there is fool's parsley. Many have been poisoned by eating the somewhat bulbous roots of the plant by mistake for young turnips. The leaves have been known to be put into soup instead of parsley.

The roots of water-hemlock, or cowbane, have been eaten by children for parsnips, with death as the inevitable consequence.

But the most virulent of all the poisons that resemble wholesome herbs, is the water dropwort, common on the banks of the Thames. When not in flower it closely resembles celery, and the roots may be easily mistaken for parsnip roots. Seventeen convicts at work on the river-bank, near Woolwich, ate of this plant, and six of them died in convulsions. The five-leaved water dropwort and the common dropwort are less poisonous, but not to be eaten without considerable danger.

The similarity of the roots of the aconite, or monk's-hood of our gardens, to those of the horse-radish has caused some fatal accidents; and the beautiful red berries of the belladonna, or deadly nightshade, have on several occasions lured children to destruction; so have those of the spotted arun, called "Lords and Ladies."

Porcelain.—The name of porcelain is derived from the Portuguese word "porcellano," which signifies a cup. It

was adopted from the circumstance that the Portuguese were the first importers of porcelain from China. In Great Britain the term China or Chinese-ware is more commonly used.

The processes of manufacture of porcelain in our own and other European countries are as follows, and are to a certain point the same in all cases.

The clay, or infusible earth, having been separated by washing from the mass of decomposed granite, is mixed with a portion of fusible earth, after which, being passed through the finer silk lawns, it is placed on kilns to evaporate the superfluous water, till it becomes a soft paste ready for the operation of the workmen. It is then taken to the *thrower*, to be fashioned on his wheel; and having attained a sufficient degree of hardness to preserve its form, it is transferred to the lathe to be more correctly shaped, and the surface made more even. It has then handles, feet, or other requisites to the vessel intended, added; and is then ready for the first firing. It is for this purpose placed in cases of earthenware called siggars or saggars, formed of a coarse kind of clay; but on the quality of these cases depends much of the whiteness of the ware; since it is important that smoke and every external substance should be entirely excluded.

These cases are arranged in the furnace, one on the other. A small fire is made, and increased till the porcelain shall have attained its proper hardness, which is ascertained by taking out small pieces from time to time, placed in cases, with lateral openings in the walls of the furnace, to be easily accessible. When this is done the fire is allowed to cool; and here the modes adopted in this country and on the Continent differ.

In England the first firing is employed to produce, by intense heat, the degree of transparency and vitrification required; but on the Continent only a small portion of heat is employed, sufficient to harden the ware enough to bear the manipulation necessary before glazing without breaking; the strength and transparency being acquired by the second firing, which, as in the case of the English first furnace, is intensely hot. Unglazed porcelain presents the appearance of white marble without any shining surface, and is called "biscuit." It is sometimes allowed to remain in this state, especially when intended for small pieces of sculpture, of which the fineness of the workmanship, and sharpness of the figures would be spoiled by glazing. The Sevres China is often left in this state.

The next operation is that of glazing, which consists in covering the porcelain with a coat of fusible or vitreous matter. The same glaze is not fit for every kind of ware, but must be suited to the ingredients which enter into its composition, and the hardness of its substance. The materials of which the glaze is composed being prepared by previously fusing together all its component parts, form a vitreous mass; this mass is finely ground in a mill, and the powder mixed with water, till it has the consistence of cream. The pieces of ware are immersed partially in this liquid, and as they greedily imbibe the water, a uniform covering remains; this should be very thin, and speedily becomes so dry that it does not adhere to the fingers when handled. Of late years a new mode of glazing has been discovered, called electro-plating, not so injurious to the health of the workmen, and which resists heat better, and does not tarnish with exposure to gas, smoke, &c.; this has received the learned name of *galocus testumis*.

The ware is now replaced in the furnace, as when in a state of biscuit; but in England the heat of the second firing is much less than on the Continent. The porcelain intended to remain white is now finished; but those intended to be painted and gilded have various processes to undergo. And here we may remark that the glaze used for the soft porcelain admits of more delicate painting, by its property of assisting to glue and fix with more certainty the metallic oxides, of which the colours are composed.

The colours employed in painting glazed porcelain are similar to those in enamel. Oxides of iron give red; gold, precipitated by means of tin, violet and purple; copper, green; cobalt, blue; earthy materials (slightly ferruginous) yellow, brown, and black. Blacks are

the most difficult colours to be obtained of a beautiful hue. No metallic oxide alone gives a good black. It is therefore composed of several oxides, which, separately, do not give black. As a general rule, we are considered to excel in purple, blue, and pink; in all other colours the Continental manufacturers surpass us.

The colours having now been applied to the ware by the painter, according to the pattern, it is again conveyed to the furnace, and the colours vitrified to their proper degree of lustre and fixation. In common porcelain, once or twice burning is sufficient; but in the finer sorts the colours are laid on many times, and as often fired ere the full effect is produced. A Liverpool manufacturer made the discovery of imitating Chinese patterns by impressions taken from copper-plates.

When porcelain is to be gilt, it is pencilled with a mixture of oil and gold, dissolved with quicksilver, with the aid of heat, and again put into the furnace. There the gold returns to the solid state, and comes out dull and flat, and is burnished with bloodstones and other polishing substances to revive its brilliancy. Much care is necessary in this operation, since, if not enough burned, the gold will separate into thin flakes, and if too much, it is not susceptible of fine polish. It is often returned to the enamel furnace six or seven times, and when it has gone through these processes, it is ready for sale.

Porter.—See *Adulterations.*

Postal Regulations.—INLAND.—RATES OF POSTAGE from and to all parts of the United Kingdom, the Channel Islands, and the Isle of Man:—

LETTERS not exceeding	1 oz.				1d.
,, exceeding	1 oz.	but not exceeding		2 oz.	1½
,, ,, ...	2 oz.	,,	,,	4 oz.	2
,, ,, ...	4 oz.	,,	,,	6 oz.	2½
,, ,, ...	6 oz.	,,	,,	8 oz.	3
,, ,, ...	8 oz	,,	,,	10 oz	3½
,, ,, ...	10 oz.	,,	,,	12 oz.	4

Any letters exceeding the weight of 12 oz. will be liable to a postage of 1d. for every ounce, beginning with the first ounce.

NEWSPAPERS. — For each registered newspaper, whether posted singly or in a packet, the postage, when prepaid, is one halfpenny; but a packet containing two or more registered newspapers is not chargeable with a higher rate of postage than would be chargeable on a book-packet of the same weight, viz., one halfpenny for every 2 oz. or fraction of 2 oz.

A newspaper which has any letter, or any communication of the nature of a letter, written in or upon its cover, will be charged as an unpaid or insufficiently paid letter.

No packet of newspapers must exceed 14lbs. in weight, nor may it exceed two feet in length or one foot in width or depth.

Publications registered for transmission abroad must be posted *within eight days* from the date of publication, including the day of publication.

BOOK POST—*Inland.*—A book-packet may contain not only books, paper, or other substance in ordinary use for writing or printing, whether plain or written or printed upon (to the exclusion of any written letter or communication of the nature of a letter), photographs, when not on glass or in frames containing glass or any other like substance, and anything usually appertaining to such articles in the way of binding and mounting, or necessary for their safe transmission by post, but also *circulars*, when these are wholly or in great part printed, engraved, or lithographed.

The postage is one halfpenny for every 2 oz. or fraction of that weight. The postage must be prepaid.

Every book-packet must be posted either without a cover or in a cover open at both ends, and in such a manner as to admit of the contents being easily withdrawn for examination; otherwise it will be treated as a letter.

There must be no letter, nor any communication of the nature of a letter, written on any part of a book-packet or its cover. If this rule be infringed, the entire packet will be treated as a letter.

No book-packet must exceed 14 lbs. in weight, two feet in length, or one foot in width or depth.

The Post Office is not responsible for any injury which books or other articles forwarded by post may sustain. Neither is the Post Office responsible for any loss or

inconvenience which may arise from the mis-sending, mis-delivery, loss, &c., of a letter or any other postal packet.

No postmaster is bound to give change, or is authorised to demand change; and when money is paid at a post office, whether as change or otherwise, no question as to its right amount, goodness, or weight, can be entertained after it has been removed from the counter.

Post Cards, which bear a halfpenny impressed stamp, are available for transmission between places in the United Kingdom only.

The front (or stamped) side is intended for the address only. There must be nothing else written, printed, or otherwise impressed on it, nor must there be any writing or printing across the stamp. On the reverse side any communication, whether of the nature of a letter or otherwise, may be written or printed; but such communication must not extend to the front side. Nothing whatever may be attached; nor may the card be folded, cut, or otherwise altered. If any of these rules be infringed, the card will be charged 1d. on delivery.

No card other than one of those issued by the Government will pass under a halfpenny stamp, if it bear on it a written communication of the nature of a letter.

Registration.—By the prepayment of a fee of fourpence, any letter, newspaper, book, or other packet, may be registered to any place in the United Kingdom or the British Colonies.

France and Countries through France.—The registration fee upon letters addressed to France, or countries through France (*exclusive of those sent in the closed mails to India, Hong Kong, Ceylon, Mauritius, Australia, Gibraltar, viâ France, Malta, Constantinople, Greece, Portugal, Spain, or Italy*) is not a fixed sum, but is, in all cases, equal to the postage.

Money Orders.—The commission on inland money orders is—

For sums under 10s.	1d.	For sums of—	
For sums of—		£5 and under £6	7d.
10s. and under £1	2d.	£6 " " £7	8d.
£1 " " £2	3d.	£7 " " £8	9d.
£2 " " £3	4d.	£8 " " £9	10d.
£3 " " £4	5d.	£9 " " £10	11d.
£4 " " £5	6d.	£10	1s.

No order is allowed to contain a fractional part of a penny.

The scale of commission for orders payable abroad:—

For sums not exceeding......	£2.		£5.		£7.		£10.	
	s.	d.	s.	d.	s.	d.	s.	d.
If payable in Switzerland or Belgium	0	3	0	6	0	9	1	0
If payable in Denmark, North Germany, Egypt, or at Malta, Gibraltar, or Constantinople......	0	9	1	6	2	3	3	0
If payable in any other place abroad (including most of the Colonies) authorised to transact money order business with this country......	1	0	2	0	3	0	4	0

Letters for Non-commissioned Officers, Soldiers, and Seamen in Her Majesty's Service, are subject to the subjoined regulations: Non-commissioned officers, bandmasters, army schoolmasters not being superintending schoolmasters or schoolmasters of the 1st class, schoolmistresses, private soldiers, or seamen belonging to Her Majesty's ships, whether serving on sea or land, and whether in a British possession or foreign country, as also enrolled pensioners in Canada, can send and receive letters, by packet or man of war, for a postage of 1d.; but if any such letters have to pass through a foreign country, they are subject, in addition, to the foreign postage, whatever that may be.

The person claiming the privilege must, at the time, be actually employed in the service of Her Majesty, and must not be either a commissioned officer or warrant officer, viz., assistant engineer, gunner, boatswain, or carpenter—the privilege not extending to these officers.

If the letter be posted within the United Kingdom, the penny must be prepaid, as must any foreign postage that may be chargeable; and, if sent by a private ship, the gratuity of one penny to the captain must also be prepaid. If posted abroad, prepayment is not compulsory; but if the letter be sent unpaid, it is, on delivery, charged 2d., together with any foreign postage or gratuity to a sea captain that may be due.

The letter must not weigh more than an ounce, and must relate entirely to the private concerns of the soldier or seaman.

Telegraph Messages.—*Tariff*:—twenty words, 1s.; twenty-five words,

1s. 3d.; thirty words, 1s. 6d.; thirty-five words, 1s. 9d.; forty words, 2s.

When a telegram is addressed to a person whose residence is beyond one and within three miles of the nearest station, 6d. per mile for delivery is charged, the lowest charge being 1s.; if beyond three miles, 1s. per mile.

Pot-au Feu.—This is a nice French dish, and is thus prepared by M. Soyer:—Put in the kettle six pounds of beef, cut into two or three pieces, bones included; one pound of mixed green vegetables; four teaspoonfuls of salt; one teaspoonful of pepper, one of sugar, and three of cloves, and eight pints of water. Let it boil gently three hours; remove some of the fat, and serve. The addition of one and a half pounds of bread, cut into slices, will make a very nutritious soup.

Potatoes in Haste.—A very nice little dish may be made of cold boiled potatoes in a very few minutes. Having peeled, cut them in slices, half an inch thick, put them in a stew-pan, pour boiling water over them; cover the stew-pan, and set it over the fire for ten minutes; then drain off all the water, add a small bit of butter, shake pepper over, and serve hot. Or, having cut the potatoes in slices, put them in a stew-pan, cover them with milk; cover the stew-pan, and set it over the fire for five minutes. Work a large teaspoonful of butter with a small one of flour, and put it to the potatoes; shake a little pepper over, and add a little parsley cut fine if liked. Cover the stew-pan for ten minutes, then turn the potatoes into a deep dish. Potatoes may be pared and cut in slices, and boiled in water with a little salt for twenty minutes, then served with butter and pepper over; or with a teaspoonful of flour, with a small bit of butter, and put it to the potatoes a few minutes before they are done; then shake a little pepper over, and serve hot.

Pot-Herbs.—Every housekeeper who possesses a patch of ground, though ever so small, should cultivate a few of the herbs which are in constant request for cookery or garnish; and this may be done mixed with flowers in borders, without in the least detracting from the beauty of a *parterre*. By this means the herbs will always be at least fresh and in the greatest perfection, and the expense is so small as to be scarcely calculable. Let any housekeeper look over her greengrocer's bills, and she will be surprised at the aggregate charge for herbs, and for such small things as horse-radish, fennel, &c., in a year. In many families it amounts to two shillings weekly, when the court in front, or patch in rear of the house, affords ample convenience for growing all that is required. We do not advocate the culture of vegetables (unless the garden is very large) in the suburbs of great towns, as market gardeners produce them much cheaper. This objection does not apply to pot-herbs, which are easy of growth, and require little trouble in the management. Pliny says that a good housewife will go into her herb-garden, instead of a spice-shop, for her seasonings, and thus save the health of her family by saving the contents of her purse. (See *Parsley*, *Mint*, *Marjoram*, *Sage*, *Thyme*, *Fennel*.)

Potichomanie.—The name, rather a clumsy one, is literally a mania for *potiches*, the French designation for Chinese and Japanese vases; but, more soberly, it is the art of imitating such vases. It is a pretty art when moderately indulged in, but is sometimes carried to an extent unsuitable alike to the purpose in view and to the materials employed. Although used to imitate every kind of porcelain and coloured earthenware, it is better fitted for large vases than for articles of smaller dimensions.

There are two varieties of the art potichomanie—on wood and on glass; the latter of which professes to look down with some contempt on the former. In the first-named variety a vase or other article is fashioned in wood, and painted with wash-colour. An Oriental pattern painted upon cloth is cut with scissors into proper form, and painted upon the wash; and the wash and the pattern or device are finally secured by varnish. The result, however, is seldom satisfactory; the varnish cracks, the appearance is coarse and commonplace, and the delicate enamel-like surface of porcelain is not even faintly imitated.

A better form of the art is that which involves the use of a vase or other article made of glass, more or less expensive than one of wood, according to circumstances. The colour-makers, who supply the necessary materials, prepare designs or ornaments printed in colours, tubes of moist colours for grounding or foundation tints, bottles of varnish and gum, essence of turpentine, brushes and pencils of various kinds, and fine sharp-pointed scissors.

The designs depend for their excellence on the skill of the draughtsman and colourist, and on an appreciation of the direct object in view; seeing that some are intended to imitate the fantastic ornamentation which we see on Chinese and Japanese vases, some the peculiar decorations of Dresden porcelains, some the landscapes and natural objects of Sèvres porcelain, while all the well-known ground tints of *rose de Pompadour*, *rose du Berri*, *bleu céleste*, *Sèvres green*, &c., must be imitated in the colour-printing of the designs. As to the crystal vessels which are to be decorated, the lady artist has only to please her own taste in selection—chimney ornaments, table ornaments, toilet ornaments, or the like. Everything being at hand, one or more printed sheets are cut up in such a way as to isolate all the portions which are conjointly to make up the device. Taste in selection and care in cutting are necessary. Most of the coloured prints are prepared with a transparent adhesive composition on the surface, and the wetting of this composition suffices to attach the pieces to the glass; but where this is not the case, liquid gum is employed. The separated pieces are stuck to the *inside* of the glass, in order that the outside may retain its glossy surface. Every little piece must be made to adhere closely to the glass, and be pressed down carefully upon it by means of a cloth or leather dabber. If the mouth of the vessel be too small to admit the hand, the ingenuity of the potichomanist will be somewhat taxed, but not hopelessly. When all the sectional bits of paper ornament have been thus applied in the proper places, the whole interior of the vessel receives a coating of unalterable varnish or melted gum, to assist in fixing the paper to the glass, and to prevent the coloured composition subsequently applied from getting under any of the edges of the paper. This coloured composition is intended to imitate the ground tint or general colour of the species of porcelain selected.

The colours require to be well prepared, and mixed with varnish or with essence of turpentine, according to the tint needed. The colour is applied either with a brush, as in ordinary painting, or else by pouring it into the vase, making it flow all over the interior, and pouring away the surplus. It generally requires a repetition of this process to render the tint clear and equable; and indeed this is the most critical feature in the art; for unless a near approach can be made to an imitation of the wonderful regularity of ground tint in good porcelain, the potichomanist had better modestly retire from the art altogether.

Such, in a few words, are the leading features in a tasteful amusement, which a colour-maker once enthusiastically asserted would "ere long secure a place among decorative arts; it will develop its resources in the embellishment of our apartments and furniture; and we shall see potichomanian artists both honoured and praised." This prediction has not yet been fulfilled; but the art is a pretty one, nevertheless.

Potted Meats.—See *Adulterations*.

Powder, Violet.—A lady's toilet table is not complete without this or some other absorbent powder. It not only dries the skin, but also tends to give a smooth surface and conceals pimples. The following is its composition, and any lady can, if she please, make it for herself:—Wheat starch, six parts by weight, orris root powder, two. Having reduced the starch to an impalpable powder, mix thoroughly with the orris root, and then perfume with otto of lemon, otto of bergamot, and otto of cloves, using twice as much of the lemon as of either of the other ottos. (See *Complexion*.)

Presents to Friends.—Presents made to friends should consist of

things likely to be often in view and in use; so that they may frequently and agreeably bring the giver to memory. We strongly recommend books that are in harmony with the tastes of those whom we are about to honour. Worthy books

> Are not companions—they are solitudes;
> We lose ourselves in them, and all our cares.

But circumstances must determine the kind of present in which the recipient's wants should be chiefly regarded.

As far, however, as your time and means will permit, give little presents. Of course you will not always meet with a grateful return, but never mind! do you think you will ever really repent of a kind action? Let them speak for you when you are absent, and they will be pretty sure to call forth answering beams of love, and joy, and thankfulness.

> "Oh! I value little presents,
> They have potent sway
> Over care, and grief, and sorrow,
> Driving all away."

We have never valued great and costly gifts as we have little presents; the first are so often the great representatives of little realities, the latter the feeble tokens of what is above all outward expression. Once when we were tempted to ridicule an ornament from its want of taste and fitness, we were stopped by the wearer's words—"It was the present of a friend." The article at once assumed another aspect; it became the representation of a precious bond, one we take upon us too lightly, and throw off too easily—the bond of friendship.

If the gift of a book is made at Christmas time, the following is an appropriate motto to be written inside the volume:—

> "On Christmas Day the shepherds knelt
> Before the Royal Infant's bed,
> And wise men came and worshipped there,
> By one bright star unconscious led.
> They brought their precious gifts, and laid
> Them, one by one, before the child;
> Myrrh and frankincense, gold and pearls,
> In rich profusion, careless piled;
> So ever since that time have men,
> Commemorating Jesus' birth,
> Made gifts to those they loved, as if
> To keep His memory green on earth."

(See *Boxes, Ornamental.*)

Poached Eggs.—See *Eggs, To Poach.*

Preserving, General Directions for.—These directions, when scrupulously followed, will be found greatly to facilitate the delicate process of preserving, and remove all difficulties:—

1. Let anything used for the purpose be clean and dry; especially the bottles.

2. Never place a preserving pan *flat* on the fire, as this will render the preserve liable to adhere to the metal, and then to burn; it should always rest on a trevet, or on the lower bar of the kitchen range.

3. After the sugar is added to them, stir the preserves gently at first, and more quickly towards the end without quitting them until they are done; this precaution will prevent their being spoiled.

4. All scum should be carefully removed from the preserves as it rises.

5. Fruit which is to be preserved must first be bleached or boiled gently, until it is sufficiently softened to absorb the sugar; and a thin syrup must be poured on it at first, or it will shrivel instead of remaining plump and becoming clear. Thus, if its weight of sugar is to be allowed, and boiled to a syrup, with a pint of water to the pound, only half the weight must be taken at first, and this must not be boiled with the water more than twenty minutes at the commencement of the process; a part of the remaining sugar must be added every time the syrup is re-boiled, unless it should otherwise be directed in the recipe.

6. To preserve both the true flavour and the colour of fruit in jams and jellies, boil them rapidly until they are well reduced, *before* the sugar is added, and quickly afterwards; but do not allow them to become so much thickened that the sugar will not dissolve in them easily and throw up its scum. In some seasons the juice is so much richer than in others, that this effect takes place almost before one is aware of it; but the drop which adheres to the skimmer, when it is held up, will show the state it has reached.

7. Never use tin, iron, or pewter spoons or skimmers for preserves, as

they will convert the colour of red fruit into a dingy purple, and impart, besides, a very unpleasant flavour.

8. When cheap jams or jellies are required, make them at once with loaf sugar, but use that which is *well refined* always for preserves in general; it is a false economy to purchase an inferior kind, as there is great waste from it in the quantity of scum which it throws up.

9. Pans of copper or bell-metal are the proper utensils in which to boil fruit; when used they must be scoured bright with sand. Tin pans turn and destroy the colour of the fruit that is put into them. A stew-pan made of iron, coated with earthenware, is very nice for preserving.

Primrose, Culture of the Chinese.—The large purple and white-fringed varieties of this flower being a great improvement both in size and colour, will still more generally commend this favourite plant to the notice of the public. About the middle of April the seeds are sown in a pan of light, rich soil, in gentle heat, in a cucumber frame, or in any other warm place; when the plants have obtained their rough leaf, they must be removed to the greenhouse, and placed on a shelf or trellis as near the glass as possible, to give them strength and dwarfness. When fit, they are potted off singly into small 60-sized pots. About the end of May they are shifted into large 60-sized pots, using compost of equal portions of turfy leaf-mould, peat, and silver-sand well mixed together in a rough state; the drainage must be carefully looked to, or most probably, if not well drained, many of the plants will damp off and others grow weakly. They are to be placed again in the greenhouse near the glass, and to have plenty of air and room. About the beginning of July, when the plants will have filled their pots with roots, they are shifted into 48-sized pots, in the same sort of compost as before, with the addition of a little decomposed cow-dung, and if any blooms appear, they are pinched off. About the middle of August they are shifted into 32-sized pots, in a compost of two-thirds charred turf, one-third rotten cow-dung and silver-sand. When large specimens are required, they are shifted into 24-sized pots, the soil to be made quite firm around the roots, and then removed to a shady situation in the open ground until, if the weather is favourable, the first or second week in October, when the best-fringed and coloured flowers are chosen, and removed to shelter under glass, where air can be freely admitted to them in fine weather. By such treatment they will bloom freely from November to May.

Probate Court.—See *Divorce and Probate Court.*

Procrastination.—Never say you will do presently what your reason and your conscience tells you should be done now. No man ever shaped his own destiny or the destinies of others wisely and well who dealt much in presentlies. Look at Nature. She never postpones. When the time arrives for the buds to open, they open; for the leaves to fall, they fall. Look upward. The shining worlds never put off their risings nor their settings. The comets even, erratic as they are, keep their appointments, and eclipses are always punctual to the minute. There are no delays in any of the movements of the universe which have been pre-determined by the absolute fiat of the Creator. Procrastination among the stars might involve the destruction of innumerable systems; procrastination in the operation of Nature upon this earth might result in famine, pestilence, and the blotting out of the human race. Man, however, being a free agent, can postpone the performance of his duty, and he does so too, frequently to his own destruction. The drafts drawn by indolence upon the future are pretty sure to be dishonoured. Make NOW your banker. Do not say you will economise presently; for presently you may be bankrupt; nor that you will repent and make atonement presently, for presently you may be judged. Bear in mind the important fact, taught alike by the history of nations, rulers, and private individuals, that in at least three cases out or five "presently" is *too late.* Rabbi

Eliezer, said, "Turn to God the day before your death." His disciples asked, "How can a man know the day of his death?" He answered them, "*Therefore you should turn to God to-day!* Perhaps you may die to-morrow; thus, every day will be employed in turning."

Proverbs Poetically Arranged.—

Act well your part, there all the honour lies,
  A little loaf is better far than none;
The smallest spark will cause a flame to rise,
  Work well commenced is more than three parts done.
He dances well to whom dame Fortune pipes,
  A wilful man will always have his way;
Dependence is a business that gripes,
  Early to bed and rise by break of day.
A little learning does a deal of harm,
  They starve in frost who will not work in heat;
The early bird it is that gets the worm,
  A crust by labour earned is always sweet.
Pride costs more than hunger, thirst, and cold,
  Do unto others as you'd be done by.
One story's good until another's told.
  A stitch in time saves nine, or very nigh.

Pudding, Carraway-seed.—Take a pound of rice, a teaspoonful of carraway-seeds, and a pinch of allspice. Mix these well together, and then tie them up in a bag or cloth, allowing room for the rice to swell to rather more than double the quantity put in. Put it into either quite cold or fast-boiling water, and let it boil an hour. It may be eaten with a little moist sugar; and those who choose may also add melted butter. By this recipe a substantial and nourishing pudding may be obtained to satisfy pocket, palate, and appetite. It is a pudding often enjoyed by children, those even not unused to plum puddings.

Pudding, Cocoa-Nut.—One pound of grated cocoa-nut; one pound of sugar; quarter of a pound of butter; twelve eggs, leaving out six whites; four spoonfuls of rosewater; four of cream; the rind of one lemon and juice of two. Break the nut and remove the black rind carefully; wash the pieces in cold water, and wipe them dry. Stir the butter and sugar to a cream, adding the rose-water and cream gradually. Beat the eggs well and separately; stir them into the butter and cream, then sprinkle in the nut. Bake in a deep dish with a puff paste. Bake it one half-hour. Sift sugar over it when baked.

Pudding, Eve's.—Six eggs; six apples chopped fine; six ounces of suet; six ounces of crackers, pounded; six ounces of currants; six ounces of sugar; a little salt and nutmeg. Boil it three hours. Serve with wine or brandy sauce.

Or—Pound three-fourths of a pound of crackers, and mix with them the same quantity of fine suet, apples, and dried currants; seven eggs; and the rind of a lemon chopped fine. Boil three hours.

Pudding, Marlborough, Two Recipes for.—1. Six large sour apples, stewed; six eggs; six ounces of butter, and the peel of a lemon grated; the juice of two lemons; two milk biscuits; rose water if liked. Use eight eggs if the biscuits are omitted. Bake in deep plates, with a rich puff paste and a thick edging.

2. To two quarts of sour apples, after they are stewed and strained, put half a pound of butter; sugar to your taste; peel of two and juice of three lemons. When cool, add thirty-two eggs, one quart of cream. Do not put these puddings into the paste until just as they are sent to the oven.

The apples to either of these recipes may be grated or chopped exceedingly fine, instead of stewing them. Perhaps the flavour is a little better.

Pulque.—Pulque is the common drink of all Mexicans, and answers to our beer, though more intoxicating. All who once get accustomed to the smell and taste like it much, and it is even said to become necessary to people after they have used it for many years. The manner of making this drink is as follows:—When the aloe is just on the point of throwing up its huge stem from the coronet of leaves, deep amidst which its broad bands had been for some time forming, the farmer or gardener scoops out the whole pith, leaving the outer rind, and thus making inside the circle of leaves a bowl-like cavity about two feet deep and eighteen inches wide, according to the size of the plant.

This cavity is soon filled with the sap which should have gone to nourish the stalk, and, as it flows, is removed several times daily for some months, or as long as the tap yields. A portion of this juice

(called honey-water, *aquamiel*) is set apart to ferment and act as a leaven or yeast for the rest. This is called "madra-pulque" (the mother of pulque), and when completely prepared, which it is in about a fortnight, a small portion of it is added to the skins or tubs containing the fresh *aquamiel*, and sets it fermenting in a day or so. A large plant is said to yield from ten to fifteen pints daily, and this for months. Others vary the process by putting a small quantity of *mescal* into the cavity in the plant to mix with the sap as it flows in, and this seems to answer very well. This process of milking the aloe is, as might be expected, a fatal one to the plant; but before it dies it always throws out shoots, which keep up the stock. The fermentation is usually conducted in skins, and as soon as this is over the pulque is fit for drinking. To the stranger both the taste and smell are horrible—something of the style of rotten eggs—but one soon gets accustomed to the flavour.

Pumice Stone.—This is really a remarkable thing, common as it is. There is indeed an awful and mysterious interest about it. Every piece of pumice stone once existed as lava in the depths of a volcano. But it not alone makes its appearance from the volcano on land, but also from the bottom of the sea. There are submarine volcanoes venting their fiery anger at such vast depths under the ocean, that their effects do not reach the surface. The pumice which they discharge being lighter than water rises to the surface, and so we obtain it. It has been seen floating over a space of 300 miles on the sea, at a great distance from land or any known volcano.

Pulsation.—An eminent physician has laid it down as a medical theory well established, that a slow pulse might in most cases be considered an indication of longevity. To support this doctrine he produces the following calculation: — One man enjoying ordinary health, has a pulse which beats 70 in a minute, 4,200 in the hour, 36,681,200 in the year. Another person of the same age has his pulse at 60 every minute, 8,600 in the hour, and 31,449,600 in the year; the difference making the extraordinary number of 5,241,600 pulsations, will give (says our theorist) the excess of action, and consequently of exhaustion, suffered by the quicker over the slower pulse, in the course of 365 days.

Pumpkin Pie.—Of the pumpkin, many varieties are raised in our gardens, and although in some parts of the country pumpkin pie is sometimes eaten, yet, too frequently, is this excellent, plentiful, and cheap production of Nature destined to "waste its sweetness on the desert air."

The varieties of the pumpkin are numerous, but the best for culinary purposes is that which is long in shape, sometimes attaining the length of two feet. In colour it is green varied with deep yellow. The flesh is very hard, and, in order to prepare it for eating, it is necessary to cook it until it is tender. The pumpkin may be dressed in a variety of ways, but it is best in a pie, prepared in the following manner:—

Peel and cut a sufficient quantity into thin slices, first scraping out the seeds, and set it, with some dried currants and sugar in a saucepan over the fire, the heat of which draws the juice out of the pumpkin, and makes it tender. No water is required. As this process occupies about three hours, it is better to stew the pumpkin the evening before it is wanted. By stewing the currants and sugar with the pumpkin, a better flavour is imparted to it. When thoroughly tender, so that it might, if required, be passed through a colander, the stewed pumpkin, which dissolves in boiling, is to be put into crust, like mince-pies, which it much resembles in flavour and appearance; or, a shallow dish may be covered with thin crust, on which the mashed pumpkin and currants are to be spread; it is then to be covered with a crust and baked. A little candied lemon or orange peel is an improvement. In this form, pumpkin pie is a wholesome and cheap substitute for mince-pies. The pumpkin is in season in the autumn and winter.

The pumpkin may be stewed with a little sugar, and instead of the currants, a few apples, pared and cored, may be added, and a little lemon-juice and peel,

with two or three cloves. This also is to be put into a crust. It may be taken hot or cold.

The pumpkin is also very good eating cooked with sausage or forcemeat, as follows:—Cut a piece off one end of the pumpkin, and remove the seeds, which lie in the middle like those of a melon. Fill the aperture with sausage or forcemeat, replace the end cut off, and bake until tender in a slow oven.

Punctuality, WANT OF.—This sad habit occasions constant disquietude in a household, and is very often prejudicial in the highest degree to any person who may regard it as merely trivial. We have known the whole pleasure of a party marred by one person.

Amongst other follies, Beau Brummell had that of choosing to be always too late for dinner. Wherever he was invited, he liked to be waited for. He thought it was a proof of his fashion and consequence. The Marquis of Abercorn had for some time submitted to this oft-repeated trial of his patience. Accordingly, one day when he had invited Brummell to dine, he desired to have the dinner on the table punctually at the time appointed. The servants obeyed, and Brummell and the cheese arrived together. The wondering beau was desired by the Marquis to sit down. He vouchsafed no apology for what had happened, but coolly said, "I hope, Mr. B., cheese is not disagreeable to you." It is said that Brummell was never late at that house in future.

Young ladies who are not punctual think it a sufficient excuse to say they could not be ready sooner, because they had to mend a glove, or some such feeble excuse. Our determination to be true to our engagment should be so absolute as to make us provide against all such contingencies, by beginning our operations so early as to leave us time for accidents, or time to spare. The unpunctual never allow themselves time enough, and the only way to cure themselves of this fault in judgment is to begin by allowing themselves double the portion they think they should need; and if, when entirely ready, they have any time left, to use it in the best way they can. Nothing bears more on the spirits of those who are the heads of the party than want of punctuality.

Quarter Days.—

Lady Day	...	25th March.
Midsummer	...	24th June.
Michaelmas	...	29th September.
Christmas	...	25th December.

Queen (The) and Royal Family.—HER MAJESTY ALEXANDRINA VICTORIA, Queen of Great Britain and Ireland, born May 24, 1819; succeeded William IV., June 20, 1837; crowned June 28, 1838; married February 10, 1840, to her cousin, Prince Albert of Saxe-Coburg, whose lamented death occurred on the 14th of December, 1861. Issue:—

H.R.H. VICTORIA ADELAIDE MARY LOUISA, Princess Royal; born November 21, 1840; married January 25, 1858, to H.R.H. Prince Frederick William of Prussia. Issue—H.R.H. Prince Frederick William Victor Albert; H.R.H. Princess Victoria Elizabeth Augusta Charlotte; H.R.H. Prince Albert William Henry; and H.R.H. Princess Frederica Wilhelmina Amelia Victoria.

H.R.H. ALBERT EDWARD, Prince of Wales, Duke of Saxony, Cornwall, and Rothesay, Earl of Dublin; born November 9, 1841; married March 10, 1863, to H.R.H. Princess Alexandra of Denmark. Issue—H.R.H. Prince Albert Victor Christian Edward, born January 8, 1864; H.R.H. Prince George Frederick Ernest Albert, born June 3, 1865; H.R.H. Princess Louise Victoria Alexandra Dagmar, born February 20, 1867; and H.R.H. Princess Victoria Alexandra Olga Mary, born July 6, 1868.

H.R.H. ALICE MAUD MARY; born April 25, 1843; married July 1, 1862, to Prince Louis of Hesse, and has issue—two daughters and a son.

H.R.H. ALFRED ERNEST ALBERT, Duke of Edinburgh; born August 6, 1844.

H.R.H. HELENA AUGUSTA VICTORIA, born May 25, 1846; married July 5, 1866, to H.R.H. Prince Christian of Augustenburg, and has issue—two sons.

H.R.H. LOUISA CAROLINE ALBERTA; born March 18, 1848; married Marquis of Lorne, March 21, 1871.

H.R.H. ARTHUR WILLIAM PATRICK ALBERT; born May 1, 1850.

H.R.H. LEOPOLD GEORGE DUNCAN ALBERT; born April 7, 1853.

H.R.H. BEATRICE MARY VICTORIA FEODORA; born April 14, 1857.

ROYAL PRINCES AND PRINCESSES.—H.R.H. GEORGE FREDERICK ALEXANDER, Duke of Cumberland, ex-King of Hanover, cousin to Her Majesty; born May 27, 1819; married February 18, 1843, to Princess Mary of Saxe-Altenberg.

H.R.H. GEORGE FREDERICK WILLIAM CHARLES, Duke of Cambridge, General Commanding-in-Chief; born March 26, 1819.

H.R.H. AUGUSTA WILHELMINA LOUISA, Duchess of Cambridge, niece of the Landgrave of Hesse; born July 25, 1795; married, in 1818, the late Duke of Cambridge.

H.R.H. AUGUSTA CAROLINE, Princess Augusta of Cambridge; born July 19, 1822; married June 28, 1843, Frederick, reigning Duke of Mecklenburg-Strelitz, and has issue—a son.

H.R.H. MARY ADELAIDE, daughter of the late Duke of Cambridge; born November 27, 1833; married, June 12, 1866, the Prince of Teck, and has issue—a daughter and a son.

Reading Aloud.—This is, no doubt, an excellent exercise, and it has been much recommended by physicians. To this also may be joined that of speaking. They are both of great advantage to those who have not sufficient leisure or opportunities for other kinds of exercise. To speak very loud, however, or exercise the voice immediately after a meal is hurtful to the lungs as well as to the organs of digestion. Singing—as, by the vibratory motions of the air, it shakes the lungs—promotes, in a remarkable degree, the circulation of the blood. Hence those sedentary mechanics, who, from habit, almost constantly sing at their work, unintentionally contribute much to the preservation of their health.

Receipts.—

Receipt or discharge given for the payment of £2 or upwards, 1*d*.

Penalty for giving a receipt without a stamp, £10 under £100; and £20 above that sum.

Penalty for not effectually cancelling or obliterating adhesive stamps when used, £10. Penalty for committing frauds in the use of adhesive stamps, £20.

Recreation.—See *Exercise.*

Respirators, CHARCOAL.—Charcoal, it is known, has long been employed for the purpose of purification, in different ways. The value of charcoal in the purification of water is also well understood, and it frequently enters into the composition of the bed through which, in our house filters, the water is made to pass. Calling to mind this use of charcoal as well as its extraordinary capability of absorbing, retaining, and oxydising the majority of even the most offensive gases, Dr. Stenhouse conceived that it might be used with equal advantage in the construction of respirators; and, with this object, he was led to make many experiments, in order to ascertain the nature and extent of the deodorising action of charcoal; and he found that it was even more effective than he had anticipated. The charcoal respirator is especially adapted for use in those forms of dyspepsia, and in those diseases of the lungs in which the breath is at all fetid or offensive, as it frequently is; also in an affected atmosphere, and in chemical and manufacturing establishments, where it is desired to prevent the inhalations of noxious or offensive effluvia—since not only is the air inspired deprived, to a great extent, of any disagreeable miasmata or gases which it may contain, but, at the same time, its temperature is raised—the charcoal respirator answering all the purposes of the ordinary metallic respirator, while its cost is trifling. There are three forms or modifications of the instrument; the one is adapted to the mouth only, the others include both mouth and nose, and are more particularly suited for use in laboratories and infected atmospheres.

Rheumatism.—There are few persons, we regret to say, who do not suffer, sooner or later, from attacks of this painful disease. The remedies, both external and internal, that are prescribed

for it are too numerous for us to submit. Some of them, no doubt, afford temporary relief; but to electricity alone can we look for a safe and permanent antidote. This we say from experience, and from the experience of others; and those who suffer, and who have not tried it, we earnestly advise to give it a trial.

Among the recent inventions for the application of electricity to the cure of rheumatism, and other chronic disorders, is the "ELECTRO-SAMARITAN," a very ingenious appliance, which may be worn with comfort, the galvanic plates being enclosed and isolated, so as to prevent irritation of the skin, and also to intensify the power of the current, which is communicated to the body by two open plates or poles—the chain itself being enclosed in gutta percha, and enveloped in cloth or silk. The sensation imparted by the "Electro-Samaritan" is simply one of a comforting stimulus—no shocks nor other unpleasant effects. The prices are moderate—from *7s. 6d.* to *21s.* The central depôt is at 113, Strand, London.

More than a hundred years ago, the Rev. John Wesley wrote thus, in the preface to a new edition of his work upon "Primitive Physick:"—"I have had occasion to collect several new remedies, tried either by myself or others. Some of these I have found to be of uncommon virtue; and one I must aver from personal knowledge, grounded on a thousand experiments, to be far superior to all the other medicines I have known—I mean electricity. I cannot but entreat those who are well-wishers of mankind to make full proof of this. Certainly it comes the nearest to a universal medicine of any yet known to the world."

Rhubarb, TURKEY.—Good rhubarb may be thus distinguished from the inferior description. The general character of good rhubarb is its having a clear yellow colour—being dry, solid, and compact, moderately heavy and brittle; when recently broken, appearing marked with yellow or reddish veins, mixed with white; being easily pulverisable, forming a powder of a fine bright yellow, having the peculiar nauseous, aromatic smell of rhubarb, and a sub-acrid, bitterish, somewhat astringent taste, and, when chewed, feeling gritty under the teeth, speedily colouring the saliva, and not appearing very mucilaginous. The form and size of the pieces are of little consequence; only you must break the large ones, to see that they are not decayed or rotten within; and also observe that they are not musty or worm-eaten. This is the more necessary, as damaged pieces are frequently so artfully dressed up, and coloured with powdered rhubarb, as to impose on the buyer by their appearance.

Rhubarb Tart; AND COMPÔTE OF RHUBARB.—Rhubarb was first cultivated on a large scale, seventy years ago, by Mr. Wyatt, of Deptford, and has now become a public favourite for tarts, which are best made thus:—Cut the stalks in lengths of four or five inches, and take off the thin skin. If you have a hot plate or hearth, lay the pieces in a dish, and pour over them a thin syrup of sugar and water. Cover with another dish, and let it simmer very slowly for an hour; or simmer in a block-tin saucepan. When cold, make into a tart, as codlins. When tender, it will be sufficient to bake the crust. *Or*—Pare the stalks as above, cut them into pieces about an inch long; put them into a basin, and sprinkle over and between them a little fine sugar. For a quart basin heaped, take a pound of common lump sugar; boil it in nearly half a pint of water to a thin syrup; when skimmed put the rhubarb into it, and as it simmers shake the pan often over the fire; simmer it gently until it *greens*, then take it off. When cold, lay it in the tart dish, with only as much syrup as will make it very moist. Put a light crust over it, and when it is baked, the tart will be done. Quarter the crust, and fill the dish with custard or cream. M. Soyer recommends red forced rhubarb, very young, which put into a preserving-pan with one pound of powdered sugar and a wine glassful of water; stew it quickly over a sharp fire, keeping the rhubarb very red, and the syrup very thick; when quite cold, serve upon a crown of puff-paste, with a border of apple marmalade.

Compôte of Rhubarb.—Simmer in a

quarter of a pint of water six ounces of sugar, and simmer in this syrup a pound of pared rhubarb stalks until they are tender. Lisbon sugar will answer, but lump sugar is preferable. This wholesome and agreeable preparation is much less served at English tables than it deserves to be; it is well suited to persons of delicate habit, who are forbidden to taste of pastry in any form; and, accompanied by a dish of boiled rice, it is preferable for children, as well as for invalids, to either tarts or puddings.

Ring, Game of the.—This game is nothing else than an application of one of the methods employed to tell several numbers thought of, and should be played in a company not exceeding nine persons, in order that it may be less complicated. Request any one of the company to take a ring, and put it on any joint of whatever finger he may think proper. The feat then is to tell what person has the ring, and on what hand, what finger, and on what joint.

For this purpose term the first person 1, the second person 2, and so on; also term the right hand 1, and the left 2. The first finger of each hand—that is to say, the thumb—must be denoted 1, the second 2, and so on to the little finger. The first joint of each finger, or that near the extremity, must be called 1, the second 2, and the third 3.

Let us now suppose that the fifth person has taken the ring, and put it on the first joint of the fourth finger of his left hand. Then, to solve the problem, nothing more is necessary than to discover these numbers: 5, equivalent to the person; 2, the hand; 4, the finger, and 1, the joint.

Commence by requesting any of the party to double the number of the person, which will give 10, and to subtract 1 from it; desire him then to multiply the remainder 9, by 5, which will give 45; to this product bid him add the number of the hand, 2, which will make 47, and then add 5, which will make 52. Desire him then to double this last number—the result will be 104—and to subtract 1, leaving 103. Tell him then to multiply the remainder by 5, which will give 515, and to add to the product the number expressing the finger, which will make 519. Then bid him add 5, which will make 524; and from 1,048, the double of this sum, let him subtract 1, which will leave 1,047. Then desire him to multiply this remainder by 5, which will give 5,235; and to add to this product 1, the fourth figure indicating the joint, which will make 5,236. In the last place, bid him again add 5, and the sum will be 5,241, the figures of which will clearly indicate the person who has the ring, and the hand, finger, and joint on which it is placed.

It is evident that all these complex operations merely amount, in reality, to multiplying by 10 the number which expresses the person, then adding that which denotes the hand, multiplying again by 10, and so on.

Ring, To Loosen a, when fast on the Finger.—The use of some cold water to the finger and hand, the hand and arm being elevated at the same time, may cause sufficient shrinking to permit of the removal; if this does not succeed, the following may. A piece of fine pack-thread or linen thread is to be wrapped evenly and firmly round the finger, from the tip as far as the ring, through which the end is to be inserted, which being done, the pack-thread must be gradually unwound by means of the end thus placed. If this process does not succeed, the ring must be filed off; it cannot remain without risk.

Another method is to thread a needle, flat in the eye, with a strong thread, pass the head of the needle with care under the ring, and pull the thread through a few inches towards the hand; wrap the long end of the thread tightly round the finger regularly all down to the nail to reduce its size, then take hold of the short end and unwind it. The thread repassing against the ring will gradually remove it from the finger.

Roach.—The angler frequently takes this fish with flies under water. They will bite at all the baits which are prepared for chub or dace, and are considered a simple and foolish fish. They spawn in May, and turn red when boiled. The compactness of their flesh gave rise to the proverb, "sound as a roach."

These fish haunt shallow and gentle streams, and the mouths of small streams which run into larger ones. In angling for roach the tackle must be strong, and the float large and well leaded. (See *Angling.*)

Rock-work.—See *Plants for Basket Ornaments.*

Rods and Lines for Angling.—See *Angling.*

Rolls, Academy.—Two quarts of flour, one pint of milk, butter size of an egg, half a cup each of sugar, yeast, and soda. Scald the milk, and when tepid put it with the other ingredients in the centre of the flour, and mix in enough of the flour to make a sponge; let it rise twelve hours; if light, knead in the rest of the flour for fifteen minutes, and let it rise till light; then knead fifteen minutes more, roll out half an inch thick in circles size of a saucer, spread with butter, double the buttered surfaces together, and let rise a few hours, until light enough to bake.

Rolls, French.—The following recipe is strongly recommended. If a peck of the very finest quality of wheaten flour is to be made into French rolls, a small quantity of it is to be mixed with as much warm water as will convert it into a dough; in the water a handful of salt should have been previously dissolved. About a pint of distiller's yeast, or, if this cannot be obtained, ale-brewer's yeast, which has been washed with some cold water to remove the bitterness, should be well worked into the dough. This is to be set by in a warm place to ferment. Meanwhile, all the rest of the flour is to be mixed with as much warm milk as will form a sponge. Half a pound of butter melted at the lowest possible degree of heat is to be poured on, along with six eggs; and the whole should be hastily mixed up together, along with the sponge, provided that it has sufficiently fermented, and is sufficiently swollen. After the mixture let the dough be left in a warm place, and when it has risen sufficiently, let it be divided, shaped into rolls, and baked in a moderately-heated oven. The oven should have been perfectly heated before the bread is put in; and the heat should be equal throughout, however difficult this may be to effect with some ill-constructed ovens.

Roman Numerals.—See *Numerals, Roman.*

Room, To Purify.—Set a pitcher of water in a room, and in a few hours it will have absorbed all the respired gases in the room, the air of which will become purer, and the water utterly filthy. The colder the water is, the greater the capacity to contain these gases. At ordinary temperatures a pail of water will contain a pint of carbonic acid gas, and several pints of ammonia. The capacity is nearly doubled by reducing the water to the temperature of ice. Hence, water kept in a room awhile is always unfit for use. For the same reason the water from a pump or cistern should always be let out in the morning before any of it is used. Impure water is more injurious than impure air.

The simple fact, set forth by Dr. Arnott long ago, that a canary bird suspended near *the top of a curtained bedstead* on which people are sleeping will generally be found dead in the morning, should have been sufficient to show the danger of breathing a vitiated medium, and the necessity for providing a constant and ample supply of fresh air in every room of our dwellings. Impure air cannot be seen; its effects are not immediate; and so it has been allowed to kill quietly its thousands annually.

Room Papers.—See *Papers for Rooms.*

Rooms, To Ventilate.—It is a common mistake to open all the lower part of the windows of an apartment; whereas, if the upper part also were opened, the object would be effected more speedily. Thus the air in an apartment is generally heated to a higher temperature than the external air, either by the heat supplied by the human body, or by lamps, candles, or fires. This renders it lighter than the external air; and consequently the external air will rush in at all openings at the lower part of the room while the warmer and lighter air passes out at the higher openings. If a candle be held in the doorway, near

the door, it will be found that the flame will be blown inwards; but if it be raised nearly to the top of the doorway, it will be blown outwards. The warm air, in this case, flows out at the top, while the cold air flows in at the bottom. A current of warm air from the room is generally rushing up the flue of the chimney, if the flue be open, even though there should be no fire lighted in the stove; hence the unwholesomeness of using chimney-boards.

Roses.—The British genus *rosa* includes twenty or more species, but we can only particularise those which are tolerably familiar to the flower-loving public. The rose is the type of its natural order, the beautiful and highly-prized *rosaceæ;* it is said to be a wild flower in nearly every country of the northern hemisphere. In northern countries the rose, in its wild state, is single, as it is with us; but in Italy, Spain, Greece, and other countries in the south of Europe it is sometimes found double.

The Linnæan system places the rose, of course, in the class and order, *icosandria polygima.* Petals it has five; stamens and pistils, many, *affixed to the calyx,* which is fleshy, five-cleft, and is, as everybody knows, the beautiful envelope in which the bud is enclosed, and which, after expansion, supports the flower so long as the corolla survives.

Let us begin with the common dog-rose, or *rosa canina.* The Greeks believed the root of this rose, used medicinally, would cure the bite of a mad dog, and they gave it a name significant of the supposed fact, and hence the Latin *canina,* which we have learnt to call dog-rose. The flowers of the *rosa canina* are of a fair blush-pink, sometimes so pale as to be nearly white; the prickles are broad, flat, bowed downwards; the leaf stalks have also hooked prickles, and the leafits are *glaucous* underneath; its oval scarlet fruit is very well known. It is principally the hip of this rose which is used by druggists in making "conserve of hips;" it is of a pleasant acid flavour, and is principally employed as a vehicle for more potent medicines. In Queen Elizabeth's time the ladies were expected to prepare this conserve themselves. From this flower the best rose-water is distilled.

Rosa arvensis, the wild, trailing dog-rose, is a very common species throughout the country. Its flowers are milk-white, on purplish foot-stalks; the leaves are of a full bright green, and the large leafits taper most gracefully: they are simply serrated. This species climbs to a great height, hanging its pure corollas most tantalisingly out of reach of all but giants. This is reputed to be the white rose which became the standard of the Yorkists in the civil wars of the fourteenth century. The story is thus related:—

Two noblemen of the blood royal meet in the Temple Gardens, and each fierce disputant claims the crown of England for his family line. One says—

> "Since you are tongue-tied, and so loth to speak,
> In dumb significance proclaim your thoughts;
> Let him that is a true-born gentleman,
> And stands upon the honour of his birth,
> If he suppose that I have pleaded truth,
> From off this briar pluck a WHITE ROSE with me."

Other noblemen pressed round, but the second disputant thus retorts:—

> "Let him that is no coward nor a flatterer,
> But dare maintain the party of the truth,
> Pluck a RED ROSE from off this thorn with me."

And so the white rose became the symbol of the Yorkists, and the red rose that of the Lancastrians, throughout the long and bloody strife that followed.

Rosa rubiginosa, the sweetbriar and the eglantine of the poets. This species is not so common in its wild state as are some others of the family, but is quite familiar as a garden plant. Its leaves, which are plentifully furnished with minute glands, exhale an agreeable balsamic fragrance. There are those who assert that the perfume of sweet-briar and the aroma of a particular kind of apple, cooked, are precisely similar. Its blossoms are pink, and very fragile.

Rosa spinosissima, or burnet rose, or, as it is occasionally called, the pimpernel rose, is a very lovely member of the *rosa* family, to be found principally in chalky, and sometimes in sandy soils. Especially it loves the wild rocky heaths of the north of England. This is a dwarf

species; its leaves are very small, of a dark green, not so glossy as those of the dog-rose, and its reddish-purple stems are thickly set with exquisitely fine thorns or prickles. Its prickles are of a creamy white, sometimes, though rarely, with a faint red tinge; their scent is pure and delicate. Perfect little bushes are frequently to be found of this species, covered with small fragrant flowers and tiny buds, only six inches in height. The hip is not scarlet, but of a purplish black colour, and full of a sweet but insipid purple juice. This species is certainly one of the most lovely of our English roses; common enough on calcareous soils, but extremely rare in other localities. It blossoms chiefly in July, though a few of its delicate cream-coloured flowers may ordinarily be discovered by the end of June. Its fruit is ripe in September.

Rosa tomentosa, or woolly-leaved rose. The whole plant exhales a powerful balsamic or resinous odour, though more strongly developed in some varieties than in others. It is a beautiful species, delighting in mountainous districts, where principally it is to be found. Its flowers are large, and of a much deeper red than those of the ordinary wild roses; the fruit is of a deep purplish red colour.

The rose has always been the object of admiration and praise, and a figure of beauty and prosperity. The Scripture says—"The desert shall rejoice and blossom as the rose." In 1486 it became the national badge of England, together with the shamrock and thistle of Ireland and Scotland. It has long been the emblem of silence, and the phrase, *sub rosâ*, implying secrecy, is said by more than one author to have originated during the wars of York and Lancaster.

This, however, is certainly a mistake. The expression is of far greater antiquity, and may be traced back to truly classical sources. With the ancient Romans the rose was ever the token-flower of sacred silence; and mythologists tell us that Cupid made Harpocrates, the god of silence, a present of the first rose, as a bribe, that he might not divulge the secrets of his mother, Venus. And in their feasts the Romans always introduced the rose. It was usually placed above the head of the guests in the banquetting-room, in order to banish restraint, and to intimate that nothing that was said *sub rosâ* (under the rose) would be divulged.

Ancient writers also assert that the rose was originally white, and was changed to red by the blood of Venus. Catullus thus describes the accident:—

"While the enamoured queen of joy
Flies to protect her lovely boy,
On whom the jealous war-god rushes,
She treads upon a thornèd rose,
And while the wound with crimson flows
The snowy floweret feels her blood and blushes."

Enormous quantities of roses were, and perhaps still are, cultivated in the East for chemical purposes. The gardens of Damascus especially were renowned for that species known to us as the damask rose. And Sir John Malcolm, once our envoy at the court of Persia, tells us of a breakfast given at a place near Shiraz, which was celebrated *on a stack of roses*. "The stack," he writes, "which was as large as a common hay-stack in England, had been formed, without much trouble, from the heaps of rose-leaves collected before they were sent into the city to be distilled."

For the rich and costly "attar," the musk rose is principally used. The rose-leaves are collected, and placed in a wooden vessel nearly full of the purest water, which is exposed for several days to the heat of the sun. This disengages the essential oil, which of course floats on the surface of the water, and is carefully collected by means of fine clean cotton wool tied to the end of a stick, from which it is squeezed into bottles, and carefully closed up. This "butter of roses," as it is sometimes called, is of a yellowish tinge, and semi-transparent. It has the property of keeping a long time without going rancid, and it yields so powerful an odour that a quantity which would adhere to the point of a needle is sufficient to perfume a whole room for more than a day.

It is also prepared by distillation, thirty pounds of water being obtained from

forty pounds of roses, and from fifteen to twenty pounds of liquid again drawn off as before. This is exposed in earthenware pans to the fresh night air, and the attar, or essential oil, is found in the morning congealed and floating on the top of the water. In order to procure three drachms from a hundred-weight of rose-leaves, the season must be good, and the operation must be carefully performed. The Provence, damask, and French roses are grown in some parts of Kent and Surrey expressly for the manufacture of rose-water.

The rose is much cultivated in Egypt and Syria, and in many parts of the Holy Land various beautiful species grow wild, and in great abundance. Moore, in his "Paradise and the Peri," says—

"Now o'er Syria's land of roses
Softly the light of eve reposes."

Mid-lent, or Mothering Sunday, was formerly called "Rose Sunday," from the Pope on this day carrying a golden rose in his hand, which he exhibits on his way to and from mass.

The rose also bore its part in the scarcely yet exploded superstitions of Midsummer Eve. A young girl plucks a rose on this particular evening, and carefully puts it aside, secure from light and air. On the 31st of December she again brings it forth. If its hue be altered, her lover is insincere; but if the faded petals still retain their crimson colour, he is true and constant, and they will in due season become husband and wife.

Perhaps one of the most delightful qualities of the rose is its fragrance after death:—

"Rich beyond the rest. E'en when it dies
It doth bequeath a charm to sweeten death."

Roses, To Preserve through the Winter.—Cut a just-opening bud in a slanting direction from the parent stem, then quickly mould hot sealing-wax close around the end for about an inch up, and carefully place it in a close box, which you must put somewhere so as to be entirely secluded from *all air*. About Christmas for the first time open the box; with a sharp knife cut off the wax, again slanting, put the roses instantly into tepid water, allow them to rest there for the space of about half a minute, then place them into cold water. Be careful not to let them be exposed too much to the sunlight, or either too cold or too hot a room. By these means roses may be preserved in full beauty in the midst of winter. Should it so happen from any inattention, or draught of air, that the leaves have lost their colour, holding them over the fumes of charcoal is sure to restore them to their pristine beauty of colour.

Rose-Water.—See *Complexion*, and *Powder, Violet*.

Rouge, Recipes for Making.—Although we strongly deprecate the practice of painting the "human face divine," however ancient it may be, yet for those who do not entertain our views we submit the four following recipes:—

1. Take one drachm of finely powdered carmine, and five drachms of powdered chalk. Mix and apply as usual.

2. Take one ounce of finely powdered French chalk, carmine fifteen grains, and half a drachm of oil of sweet almonds. Mix well.

3. *Liquid Rouge.*—Take of rouge, spirits of wine, white wine vinegar, and water, equal parts. Mix, and apply with a piece of fine linen rag.

4. *Spanish Rouge.*—Take a piece of linen rag, or, still better, some jeweller's cotton. Wet it with tincture of cochineal until a good deep colour is obtained, and let it dry. When required, moisten the wool, and rub the skin with it till the desired tint is obtained.

Royal Family.—See *Queen*.

Rum.—See *Adulterations*.

Rusks.—See *Bread and Biscuits*.

Rust, To Prevent.—Dr. Grace Calvert states that iron immersed for a few minutes in a solution of carbonate of potash or soda will not rust for years, though exposed continually in a damp atmosphere. It was believed long ago by soap and alkali merchants that the caustic alkalies (soda and potash) protected iron and steel from rust, but that the components of these salts preserved the same property as they do in a caustic state now. It does not seem to matter whether the solution is made with fresh or sea water.

Sage.—The ancient name, *Salvia*, of this useful herb is supposed to allude to the healing and salutary qualities of the plant. The English word sage is derived from the French word *sage* (wise), having the property, it is said, of strengthening the memory. At present, however, it is not considered as an article of much importance in medicine. It is sometimes employed as a sudorific, and is also drunk in the morning, in the form of tea, for strengthening the nerves, or in cases of weakness of the stomach. But the more general use of sage is in seasoning for strong meats, ducks, pigs, sausages, &c.

All the varieties of this herb are easily propagated by taking off slips or cuttings, and planting them in April in any light dry soil, the less enriched with dung the better. Slips both of the former and the same year's growth may be used, but the plants raised from young slips are generally the strongest and most bushy.

In preparing the sage for drying, the reader is referred to what has been said under the head of MINT; only, in gathering it, care and attention should be given not to cut the tops too close, so as to render the plants naked and stubby, especially when late in autumn and winter, as they would be more liable to suffer from severe frost than when the head is preserved somewhat full and regular. Sage, from the thick texture of its leaves, will retain its virtue, when in a dry state, for many months.

Sago Fruit Pudding.—The following will be found by the dyspeptic, or those forbidden to eat pastry, an excellent substitute:—Boil a tea-cupful of sago as thick as it can be made to boil without burning; put about four or five tablespoonfuls in the bottom of a quart basin; then a layer of baked fruit of any sort (sweetened), and fill the basin to the brim with alternate layers of fruit and sago. Put it in a cool place for some little time, and it will become solid. It is best when made shortly after breakfast, and allowed to stand till wanted to warm either in an oven, over boiling water, or before the fire with a plate turned over it, for dinner. The sago boils best when soaked in cold water for a few hours before using. Rice is used in exactly the same way. By way of change, line a basin with the rice or sago, when very thick, and spread a thick layer of the same over a large dinner-plate. When cold and stiff turn the basin over it, and with a knife cut the sago round the edge of the basin; the parings put in the bottom of the basin, and then fill with baked fruit, after which put the sago in the plate on the top of the basin, to act as a cover. The smooth side must be upwards. Eaten with mock cream, made as follows, it is delicious:—Pour half a pint of boiling milk on a teaspoonful of arrowroot, well mixed with a small quantity of the same; stir the mixture well, and have the white of an egg well beaten, and when about half cold add it, and placing the whole over the fire, stir till it nearly boils, then strain for use.

Saint Patrick's Day.—St. Patrick, apostle of Ireland, was born at the close of the fourth century, at Killpatrick, between Dumbarton and Glasgow. At the age of sixteen he was carried away, with many of his father's vassals, into slavery, and, it is said, compelled to keep cattle for six months in the mountains. Having visited France and Italy, he received a commission from Pope Celestine to his native land, and he assiduously engaged in the work to which he was dedicated, of spreading the views of the Roman Catholic Church in its remote districts. The people still entertain a high veneration for him, and attribute to him an endless catalogue of miracles. It is affirmed that "after the death of St. Patrick, there was no night for twelve days." An illustration of the veneration with which he was regarded by the Irish people is found in the circumstance that great numbers of spots and objects are dedicated to his memory. Among them may be mentioned a rock, having the appearance of a chair, on which, it was affirmed, he was accustomed to sit; but the most celebrated spot in connection with this saint, and the one most visited on St. Patrick's Day, is Croagh Patrick. This "sacred hill" is situated on the south of Westport, in the county of Mayo, and is said to be the

highest mountain in the kingdom, raising its "conic culmen" above the clouds. It was from this spot that St. Patrick is declared to have thrown all the venomous serpents and other noxious animals into the sea; and here the bare feet of his votaries have excavated a path on its rocky face, to do penance on its top, by fasting, prayer, and perambulations on their bare knees, as they stain the earth with the blood which issues from the wounds thus created.

The shamrock or trefoil, as a distinguishing mark denoting the kingdom of Ireland, is probably of great antiquity; not, perhaps, as an *heraldic* badge, but as peculiar to Ireland, in connection with its patron saint, who is represented in the habit of a bishop, holding a trefoil. Such was the chasteness and beauty of this emblem, that it formed one of the earliest ornaments in the architecture of the twelfth and thirteenth centuries, and continued throughout the successive changes and beauties of all that is resplendent in the Gothic style. Its intimate allusion to the fundamental doctrines of the church would have naturally introduced it into ecclesiastical architecture; but as it is said St. Patrick taught his early converts to Christianity the existence of the Holy Trinity by referring to the trefoil, it has the highest claim upon our veneration; and every devout Irishman instinctively cherishes it as an emblem of his country and of his faith.

In the latter part of the last century it was selected to become a conspicuous ornament in the insignia of the knight of the order of St. Patrick, and is now incorporated with the rose and thistle in the national badge of the United Kingdom.

Queen Victoria has most tastefully placed this incorporated national badge in her royal diadem in lieu of the French fleur-de-lis; and the shamrock of Ireland glitters, for the first time, on the brow of the monarch of this great empire. The order of St. Patrick was founded by George III. in 1783; and in 1801 the shamrock was introduced as a badge for Ireland, and, with the rose and thistle, all springing from one stalk, composes the badge for the United Kingdom. The diadem worn by the queen is a circle, on the rim of which the united badge, composed as above mentioned, is placed between the crosses patées, in lieu of the fleur-de-lis; which, however, are retained in the crown itself.

St. Swithin's Day.—"If it rains on St. Swithin's Day, it will rain the next forty days afterwards." This is the legend. In Mr. Douce's interleaved copy of Brand's "Popular Antiquities" there is a printed statement which says—"In the year 865, St. Swithen, Bishop of Winchester (to which rank he was raised by king Ethelbert, the Dane), dying, was canonised by the pope. He was singular for his desire to be buried in the open churchyard, and not in the chancel of the minster, as was usual with other bishops, which request was complied with: but the monks, on his being canonised, taking it into their heads that it was disgraceful for the saint to lie in the open churchyard, resolved to remove his body into the choir, which was to have been done, with solemn procession, on the 15th July. It rained, however, so violently on that day, and for forty days succeeding, as had hardly ever been known: which made them set aside their design as heretical and blasphemous; and, instead, they erected a chapel over his grave, at which many miracles are said to have been wrought." Churchill, Gay, Ben Jonson, and other poets and satirists, have noticed St. Swithin with the merest ridicule. In "Poor Richard's Almanac," also, for 1697, the saying, together with one of these miracles, is noticeable in these lines:—

"In this month is St. Swithen's Day;
On which, if that it rains, they say,
Full forty days after it will,
Or more or less, some rain distil.
This Swithen was a saint, I trow,
And Winchester's bishop also,
Who, in his time, did many a feat,
As popish legends do repeat.
A woman having broke her eggs,
By stumbling at another's legs,
For which she made a woful cry;
St. Swithen chanced for to come by,
Who made them all as sound, or more,
Than ever that they were before.
But whether this were so, or no,
'Tis more than you or I do know;
Better it is to rise betime,
And to make hay while sun doth shine."

St. Valentine.—What hopes and fears arise in the lover's heart on the memorable 14th of February—for is not that sweet St. Valentine's Day?—and is not that day sacred to love and love-making? Unhappily, very little is known of the saint, but the works he has left behind him have crossed the hearts of every one of us, especially the postman. Wheatley, in his "Illustration of the Common Prayer," tells us that the saint was a man of most admirable parts, and so famous for his love and charity, that the custom of choosing Valentines upon his festival took its rise from thence. St. Valentine was unmarried himself, but the cause of marriage in others.

A good-natured gentleman of the name of Misson, who lived about two centuries ago, says of St. Valentine's Day, that it is "a time when all living nature inclines to couple, and the young folks in England, and Scotland too, by a very ancient custom, celebrate a little festival that tends to the same end. An equal number of maids and bachelors get together; each write their true or some feigned name, upon separate billets, which they roll up and draw, by way of lots, the men taking the maids' billets: so that each of the young men lights upon a girl that he calls his valentine. Fortune having thus divided the company into so many couples, the valentines give balls and treats to their mistresses, wear their billets several days upon their bosoms or sleeves; and this little sport often ends in love and marriage."

Lydgate, the poet of Bury, in the fifteenth century thus refers to this practice:—

"Saint Valentine, of custom year by year,
Men have an usance in this region,
To look and search Cupid's calendere,
And choose their choice by great affection:
Such as be prick'd with Cupid's motion,
Taking their choice as their lot doth fall;
But I love one which excelleth all."

The divinations practised on Valentine's Day is a curious subject. Herrick mentions one by rosebuds:—

"She must no more a-maying;
Or, by rosebuds divine
Who'll be her valentine."

Perhaps the poet may here allude to a practice similar to the following, quoted by Brand:—"Last Friday was Valentine Day; and, the night before, I got five bay-leaves and pinned four of them to the four corners of my pillow, and the fifth to the middle; and then, if I dreamt of my sweetheart, Betty said we should be married before the year was out." Many other curious customs are related by different writers, in honour of this day; but of all the quotations that could be made, none is more quaint and striking than the following, from the diary of the celebrated Pepys. On the 14th of February, 1667, is there entered: "This morning came up to my wife's bedside—I being up, dressing myself—little Will Mercer, to her valentine, and brought her name, written upon blue paper in gold letters, done by myself very pretty; and we were both well pleased with it. But I am also this year my wife's valentine, and it will cost me £5; but that I must have laid out, if we had not been valentines." He also adds: "I find that Mrs. Pierce's little girl is my valentine, she having drawn me—which I was not sorry for, easing me of something more than I must have given to others. But I here do first observe the drawing of mottoes as well as names; so that Pierce, who drew my wife, did draw also a motto, and this girl drew another for me. What mine was, I forget; but my wife's was most courteous and most fair, which, as it may be used as an anagram upon each name, might be very pretty. One wonder I observed to-day—there was no music in the morning, to call up our new-married friend (Peg Penn), which is very mean, methinks."

That valentines were not confined to the lower classes in the days of Pepys, and were sometimes of a very costly description, may be judged from the following statement:—"The Duke of York being once Mrs. Stuart's valentine, did give her a jewel of about £800, and my Lord Mandeville, her valentine this year, a ring of about £300."

And in the following year the gossiping Pepys notes down:—"This evening my wife did, with great pleasure, show

me her stock of jewels, increased by the ring she hath made lately, as my valentine's gift this year, a Turkey stone set with diamonds; with this, and what she had, she reckons that she hath £150 worth of jewels of one kind or other, and I am glad of it, for it is fit the wench should have something to content herself with."

In other days, too, some of the young ladies employed desperate methods of divination to discover who was to be their valentine. Some wrote their lovers' names upon bits of paper, and rolled them up in clay, and put them into water, and the first that rose to the surface was to be the lucky fellow. Other maidens had recourse to a more disagreeable plan; they boiled an egg hard, and took out the yolk, and filled the cavity with salt. This the poor victim of love ate shell and all, without speaking or drinking after it. Such devotion is alarmingly lively.

Ah! how we have degenerated. It makes the heart ache to read of these wonderful doings, and then to turn to our present ways and habits. What is St. Valentine's Day now? Look at yonder stationer's shop filled with penny drawings, all of them insulting in design and execution. How coarsely are they coloured! Alas! where are the gallant meetings of the days of Charles the Second? What kind of poetry is this to send in an unpaid letter, and make an unhappy youth pay twopence for?—

"A picture of yourself I send,
Besides a splendid new rope's end;
You jolter-headed, stupid elf,
Talk not of love; go, hang yourself!"

Let us rush away and hurry to the shop where the lace-edged note paper, and the silver doves resting on red satin roses will soothe our ruffled feelings. This is polite, and as it should be. But how expensive are the higher emotions! The insults were only a penny each; here you cannot touch a temple of love under from a shilling to a guinea! The poetry of these is simple, natural, and to the point. Here is an example:—

"If you will be mine,
I will be thine;
So answer, 'Yes,' my Valentine."

That's business-like, even though it is not worthy of the poet-laureate. Everything depends upon how the words are spoken; and how could they be wanting in the finest expression when read from *such* superb satin note-paper, with *such* richly embossed edges, and *such* a golden chariot, drawn by doves perched up at the top?

Some of our young ladies, in whom superstition has not quite grown cold, indulge in "charms" to find out something about their future husbands. On receiving a valentine that has any particular declaration in it they lay it wide open; then fold it in nine folds and pin it next the heart, and thus wear it till bed-time; then put it in their left glove and place it under their head. If they dream of gold or costly gems their lover is true; if of white linen, they will lose him by death; and if of flowers, he will prove false.

According to Mother Bunch—whoever that dame may be—the following lines should be said by the girl on retiring to rest the following night—

"Sweet guardian angels, let me have
What I most earnestly do crave—
A Valentine endowed with love,
That will both kind and constant prove."

But with regard to the origin of this festival in the calendar, there are many conflicting opinions. St. Valentine, who suffered martyrdom in the reign of the Emperor Claudius, was eminently distinguished for his love and charity; and the custom of choosing valentines, or special loving friends, on this day, is by some supposed to have thence originated. The following solution is, however, the more probable one:—It was the practice in ancient Rome, during a great part of the month of February, to celebrate the Lupercalia, which were feasts in honour of Pan and Juno, whence the latter deity was named Februata, or Februalis. On this occasion, amidst a variety of ceremonies, the names of young women were put into a box, from which they were drawn by the men, as chance directed. The pastors of the early Christian Church, who by every possible means endeavoured to eradicate the vestiges of pagan superstitions, and chiefly by some commutations of their forms, substituted, in the present instance, the

names of particular saints, instead of those of the women; and as the festival of the Lupercalia had commenced about the middle of February, they appear to have chosen St. Valentine's Day for celebrating the new feast, because it occurred nearly at the same time.

Salad, Endive.—Wash quickly four heads of very white endive. The French is much preferable to the English, and is imported in abundance to the London markets. Why they should be washed quickly is, that if they remain in the water any length of time they become as bitter as gall. Take off the green leaves, if any; cut the stem off and the leaf in two when too long; shake well in a cloth to dry, and put in your salad bowl, which you have previously rubbed with a piece of garlic; add to your salad a teaspoonful of salt, a quarter one of pepper, five teaspoonfuls of oil, two of vinegar; rub a piece of garlic on two crusts of bread, each about the size of a walnut; add them to your salad, which you stir well for a few minutes with a spoon and fork, and serve.

The garlic in this salad, far from being objectionable, gives only a slight flavour, to which no one can object, but which, on the contrary, is highly appreciated by the epicure. Garlic may be either increased or diminished according to taste.

To devil the same, rub each piece over with the following mixture, having made a deep incision in any article of food that may be subjected to this Mephistophelean process. Put in a bowl a good tablespoonful of Durham mustard, which mix with four tablespoonfuls of Chili vinegar; add to it a tablespoonful of grated horseradish, two bruised shalots, a tablespoonful of salt, half ditto each of cayenne and black pepper, one of pounded sugar, and two of chopped chilies, if handy; add the yolks of two raw eggs; take a paste-brush, and, after having slightly seasoned each piece with salt, rub over each with the same, probing some in the incisions. First broil slowly, and then the last few minutes, as near as possible the Pandemonium fire. The yolks may be omitted. (See *Chicken Salad.*)

Salmon.—To fish for salmon is the angler's chief delight. These fish are accustomed to quit the fresh waters, and retire into the sea at the approach of winter, which, at the commencement of April, they usually leave for rivers; but the Wye and Usk in Monmouthshire, and the Exe in Devonshire, have them in season during the six wintry months. Salmon are caught in several rivers in England, but prefer chilly streams, and are consequently found in greater numbers northward, in the rivers of Scotland, particularly in the Tweed, the Tyne, the Clyde, and the Tay. In the latter, they occasionally occur of the immense weight of seventy pounds; and in the Tweed and Clyde, at about fifty or sixty pounds weight. They are also found in all the great streams of Europe N. of 51°, and in the United States of America N. of 41°. Some accounts of the N.W. coast of America describe them also as abounding there. They have also been acclimatised in Australia with success. In the American rivers they seldom exceed from fifteen to twenty pounds weight. They appear some time in the rivers before they are in a healthy state; and the best season for the angler to commence his operations is toward the close of the month of May, or the early part of June. The usual time for the salmon to deposit their spawn is from the first of September to the latter end of October, when they grow very sickly both in appearance and flavour. Previous to this, they generally retire to brooks which branch out irregularly from the main river, or remain in shallows, where they sometimes are scarcely covered with water. It is a well authenticated fact that they never swim down the stream, unless during the period of their emigration to the sea, or when their position is molested. The length of the rod for catching salmon should be from about seventeen to twenty feet, which, however, can be regulated according to the breadth and general size of the river in which the angler pursues his operations. The reel, which on these occasions forms the most material appendage to the rod, is made of brass; it should be constructed with the utmost nicety,

and capable of the swiftest circumvolutions. The line, which is fastened to the reel, may be composed either of strong silk or twisted horsehair, gradually diminishing at the top, and having a loop at the end of the wheel, and another at the cast lines, to fasten them to each other. Let this last line be very carefully twisted with the fingers, and shorter than the rod, so that none of the knots may come within the top ring; sixteen to twenty horse-hairs may be used in the upper links, but they must be diminished toward the hook, where they are best made of three small round twisted silkworm guts, or a few strong horse-hairs. Of flies, we recommend the natural ones, for they have been used with great success. The artificial ones should be generally of large dimensions, and of a gaudy and glittering colour. The materials that compose them are hairs, furs, and wools, of every variety that can be collected, mingled with the tail-feathers of cocks and game, and secured together by plated wire, or gold and silver thread, marking-silk, shoemakers' wax, beeswax, &c. Their wings may be made of the feathers of domestic fowls, or any others of a showy colour. Imitate principally the natural flies recommended; but you may safely indulge your fancy, rather than depart without a bite; for many anglers succeed with the most monstrous and capricious baits of this kind. A raw cockle or mussel taken out of the shell, prawns, and minnows, have also been recommended as salmon baits. The mode of angling with these is to drop the line, which must be totally unencumbered with shot, into some shallow which approximates to the edge of a hole of some considerable depth, and in this situation to suffer it to be carried in by the current. The novice in angling will, at first, experience considerable difficulty in throwing his line to any great extent. For this we can give no recipe, but a most inflexible determination to proceed, and the most consummate patience in disappointment. It should always be thrown across the river, and on the off side from the spot where you expect the fish to rise. When you imagine that the salmon has been struck, be cautious in giving him time sufficient to enable him to poach his bait, that is, to swallow it fairly and securely. After this, fix the hook firmly in him, by a gentle twitch. On the first sensation of this pain, the salmon will plunge and spring with great violence, and use every endeavour of strength and cunning to effect his escape. He will then, perhaps, run away with a considerable length of line, which is to be kept in a gently relaxed situation, so that it may always yield with facility to his obstinate resistance: nor can you give him too much line, if you do but clear it of weeds and encumbrances. If he now become sullen and quiet in the water, rouse him gently by flinging in a few stones; and when he once more commences resistance, do not be too eager in checking his career, but let him gradually exhaust himself of his strength; follow him down the stream, or allow him to cross it; while, at every opportunity, you keep winding up your line until you approach him in this wearied state, and take him softly by the gills out of the water. The salmon peel may be caught in the same manner; he is smaller than the salmon, and seldom exceeds fourteen or fifteen inches in length. (See *Angling, Flies, Hooks, &c.*)

Salt.—One of the most frequent expressions at a dinner table is, "The salt, if you please," and surely an article of such importance to our dietary ought to be known something about by the consumers. Salt is a chemical compound, of twenty-three parts by weight of a beautifully white but soft metal called sodium, discovered by Sir Humphrey Davy in 1807, and of thirty-five parts of a pungent, yellowish green gas, called chlorine, discovered by Scheele in 1774—these two combined form this, the most widely-diffused and useful compound in the world. It is found in the sea, and in the rocks, from which our principal supply comes.

The most wonderful deposits are in Poland and Hungary, where it is quarried like a rock, one of the Polish mines having been worked since 1241. These Polish salt mines have heard the groan of many a poor captive, and have seen

the last agonies of many a brave man; for until lately, they were worked entirely by the State prisoners of Austria, Russia, or Poland, whichever happened to be in power at the time; and once the offender, or fancied hindrance to some other person's advancement, was let down into this subterranean prison, he never saw the light of day again. So salt has its history as well as science.

Other large deposits are found in Cheshire, where the water is forced down by pipes into the salt, and is again pumped up brine, which is evaporated, and the salt obtained. To such an extent has this been carried, that one town in the "salt country," as it is called, has scarcely an upright house in it, all the foundations having sunk with the ground, to fill up the cavity left by the extracted salt.

In Virginia there are beds of salt, and the Salmon Mountains in Oregon are capable of affording large quantities of the same material. The brine springs of Salina and Syracuse are well known, and from about forty gallons of their brine one bushel of salt is obtained. There are also extensive salt springs in Ohio. The brine is pumped up from wells made in the rock, and runs into boilers. These boilers are large iron kettles set in brickwork, and when fires are lighted under them, the brine is quickly evaporated. The moment the lime begins to boil, it becomes turbid, from the compounds of lime that it contains, and which are soluble in cold, but not in hot water; these first sediments are taken out with ladles called "bittern ladles," and the salt being next deposited from the brine, is carried away to drain and dry. The remaining liquid contains a great quantity of magnesia in various forms, which gives it the name of "bittern," from the taste peculiar to magnesia in every form.

"But how did this salt come into the rock?" is the natural query, and the wonder seems greater when we recollect that salt beds are found in nearly every one of the strata composing the earth's crust. This fact proves another, that as the majority of these salt beds have come from lakes left in the hollows of the rocks by the recedence of the sea, the sea has through all the geologic ages been as salt as it is to day. Let us take the Great Salt Lake as an illustration, it being the largest salt lake in the world, but by no means the only one, as such inland masses of saline matter are found over the whole earth; but as this is the greatest in extent, it will form the best example. It is situated at an elevation of 4,200 feet above the level of the sea, on the Rocky Mountains, and has an area of 2,000 square miles; yet, high as it is, "once upon a time," as the story-books say, it was part of the sea, which retired by the upheaval of the rocks, and that great basin took its salt water up with it. There are also, however, salt rocks taking their place, in regular geologic series with other rocks, interspersed between red sandstone, magnesian and carboniferous strata; these we can only account for as we do for other stratified rocks, viz., that they were deposited from their solution in water, or carried mechanically to the spot where now found by that ever mobile liquid.

Salt is used in numerous manufactures. It is used in large quantities in glass making. Leather-dressers and skinners also employ it in the processes of their trade. Much salt is also consumed in glazing earthenware, it being found preferable to preparations of lead, because it is not liable to be dissolved by vinegar. Ironfounders use it in metallic cements, and in the process of imparting a high degree of malleability to bar iron; whitesmiths and cutlers, in case-hardening, and in tempering files and other edged tools; and silver-refiners mix it with other substances for reducing metallic ores. It is used to moderate the flame of combustible bodies. It is of great value in horticulture, preventing the depredations of insects on fruit trees, and protecting them from the honey-dew. In cider orchards, if a small trench be dug at a few yards from each tree, and a few pounds of salt placed in it, the rain will carry it to the root, and produce an astonishing effect on the fertility of the trees. Indeed, as a manure for general agricultural purposes, salt is invaluable. Many chemical substances

are produced from common, or table salt.

But who shall reckon up the uses to which it is applied by the housewife, or estimate the quantity consumed annually in our domestic economy only? Salt has always been held to be a useful and salutary ingredient in human food. Ancient nations adopted salt as the symbol of many of the cardinal virtues. It was especially the emblem of friendship; and, according to the custom of our forefathers, salt was the first thing set on the table and the last thing removed, even at the most sumptuous feasts. Still, among many nations, it is held a mark of courtesy for one person to hand salt to another. These customs, and numerous others of a corresponding character, may be easily traced to the prevailing idea of salt being, in a pre-eminent degree, a wholesome and salutary article of food.

It is to the presence of salt that the water of the ocean owes its power of resisting frost, until it has cooled down to 28°; and thus the great highway of nations is kept constantly open to the traffic of man.

Salt and Salt Provisions, TABLE OF.—

A peck of salt	14	lbs.
A bushel of salt	56	„
„ rock salt... ...	65	„
Beef, Irish, tierce, 38 pieces, or	304	„
„ barrel, 25 pieces of 8lbs.,	200	„
„ firkin, 25 pieces of 4lbs.,	100	„
Butter, firkin	56	„
„ Irish, firkin ... about	70	„
„ tub	84	„
„ barrel	2	cwt.
„ Dutch, cask	1	[illegible]
Pork, Irish, tierce, 80 pieces, or	320	lbs.
„ barrel, army, 52 pieces, or	20[illegible]	„
„ „ mess, 50 pieces, or	2[illegible]0	„
„ firkin, 25 pieces, or	[illegible]00	„

Salve.—See *Lip-salve.*

Sand Pictures, How to Make.—Any person who has visited the Isle of Wight, and particularly the neighbourhood of Alum Bay, must have observed there phials and bottles, of nearly every conceivable shape, filled with various coloured sands, arranged in such a manner that their colours form strong contrasts; and they may also have observed pictures of Black Gang Chine, Alum Bay, &c., formed of different coloured sands. Our intention is now to present full instructions for making these pictures.

The materials necessary for the construction of sand pictures are cardboard or mill-board, gum arabic in solution, glue in solution, various coloured paints in powder, designs, camel-hair brushes, a pencil, and the sands. The *coloured sands* may be obtained from Alum Bay, where various strata of them may be observed, on one side of the bay, forming a pleasing and strange feature in the view. The white sand is very valuable, being used in the manufacture of glass and china. The sands require to be kept separate in boxes or trays, which should be arranged with due regard to their colours in the respective gradations of red, blue, yellow, and white, with all the intermediate tints.

We would suggest to all who visit the various watering places during the summer months, to collect the different coloured sands that present themselves, and preserve them in different bottles, boxes, or trays.

All the sands used in this kind of work require to be carefully dried in saucers, either in an oven or before the fire, and afterwards kept in a dry place.

To commence the formation of a sand picture, take the design you intend to copy and place it in a slanting position opposite to you; then draw the outline upon a piece of cardboard, and fill in the proper colours roughly—that is to say, lay a coat of blue over the sections which are to be coloured blue, and so on. Allow the several colours to dry, and then proceed.

To prepare the picture.—This consists in passing a coat of mucilage of gum-arabic or thin glue over each section at a time. For example—you pass a brush charged with either of the above solutions first over all the blues, and afterwards apply the sand as hereafter directed; then the gum or glue is to be applied over the parts coloured red, and so on, until the design is complete. Great care is required in laying on the

fine and delicate touches in some parts of the picture, because the gum or glue is liable to spread, and thus destroy the effect by causing too much sand to adhere to a part where it was not required.

Applying the sand does not require much dexterity; the only preparation necessary is having the sand perfectly dry, and each colour kept in a distinct box or tray. When the gum or glue has been applied over any particular colour upon the outline, select the coloured sand required, and sift it through a piece of fine muslin over the *whole* of the outline; allow it to remain for about two minutes, then shake off the superfluous sand upon a sheet of writing-paper, and return it to the proper box or tray. Proceed in this manner with each colour until the outline is filled in, then set it aside for three or four hours in a warm place, or, if the cardboard is very stiff, place the picture upon the hearth-rug before the fire, and it will soon dry.

Touching up the picture should not be attempted until the whole of it is perfectly dry, and then the strong outlines, such as architectural work, veinings, and divisions of rocks, trees, drapery, &c., should be touched up with colours in powder, mixed with some of the thin glue. Indian ink is very useful for strengthening different parts of the picture, giving a finish to the whole that it would not otherwise possess.

When sand pictures are finished, they may be framed and glazed in the same manner as prints.

Sandwiches, Origin of.—To the memory of "Lord Sandwich" belongs the name of that edible. Being, during his administration (as was very usual with him), at a gambling-house, he had, in the fascination of play, for more than five and twenty hours forgotten fatigue and hunger, when suddenly feeling disposed to break his fast, though still rivetted to the table, he called to bid some one bring anything that was to be had to eat, which happened to prove a slice of beef and two pieces of bread. Placing them together for the sake of expedition, he devoured them with the greatest relish. The most ecstatic encomiums published his discovery, and giving it his name, he bequeathed it as a memento to his country, as one of the most important acts of his administration!

Sarsaparilla.—See *Adulterations.*

Satin, Painting on.—When the outline is made according to the artist's fancy, a wash of isinglass should with care be laid on, to take away the glue and sleekiness of the satin, otherwise the colours will not work lively; the isinglass to be melted, in very clear water, over the fire, so as not to be very glutinous, otherwise it will probably discolour the satin, and consequently spoil the colours.

The lights are to be made by a small tincture of the colour of the intended flower mixed with the flake white, so much as just to make a degree from the colour of the satin; for instance, if a blue flower, the bice or verditer, a very small quantity of it with the white, using less proportionately as the shades grow darker; and in the most dark, indigo alone may be used, it being by that time rendered opaque enough; but great care must be used not to lay the colours on too thick, otherwise they will crack; a little white sugar-candy will be found necessary, when mixed with the gum water, as a preventive to that inconvenience. If a flower happen to be of so deep a colour as not to admit of any pure white in the lightest of the parts, a sort of priming of white should be laid on; after which, when dry, begin with the ground colour of the flower, proceeding gradually with the shades.

Sauce, Bread.—One of our lady friends says, "The following was my great-grandmamma's plan for making bread sauce, and has always been highly approved:—

"First take the fine crumb of a stale wheaten loaf,
And slice very thin till you think you've enough;
Pour o'er it hot milk, in which has been boil'd
An onion, to give it the flavour, but mild.
For two hours cover close, to keep in the
Then beat it up well with good butter and cream,

Now season to taste, with white pepper and
salt,
Beat well with a fork, and serve it up hot.
Now this is the way we have made it for years,
And I know it has pleased both Commons and
Peers;
But if your old bachelor finds fault with this,
To make it himself would not be amiss,
As then he would find out the pains that you
take
To please his fine taste in whatever you make."

Sauce, Brown.—Put into a saucepan two pounds of beef, the same quantity of veal, a whole fowl, some onions and carrots, and throw over them a pint of water; place the whole on a strong fire until it begins to glaze; then put the vessel on a slower fire, and when your glaze begins to brown, put to it a little stock, adding also some mushrooms, chiboles, a bunch of parsley, a few cloves, and bay leaves; skim it, put a little salt, and let it simmer for three hours; then strain the liquor off, and add to it a roux which you have made in a separate vessel, and let it boil again another hour; you have only then to take the fat off and pass it through a sieve, when it is ready for use. (See *Adulterations, Lobster Sauce, Egg Sauce, and Onion Sauce.*)

Scales and Weights.—See *Weights and Scales.*

Scammony. — See *Adulterations.*

Scent Cases, Bead, To Make. —Having decided upon the colour of the beads—let us say, blue and white—with a bead needle, and fine strong silk or cotton, commence by making a chain of 2 blue, 1 white, till you have attained the length of an inch and a half, or two inches, taking care to begin and end with a white bead; then, turning the chain, thread with 2 blue, and place your needle through the first white—which, for convenience sake, should be of rather larger size than the blue—and thus form a small loop. Thread again with 2 blue, 1 white, 2 blue, miss the next white in chain, and place your needle in the one following; and so continue throughout the line, forming a succession of small diamonds. Turn as before, taking the middle white of each loop, and work as much as will form a complete square when doubled. Then, with some blue sarsenet, make a bag a size less than the square you have worked, fill with pot-pourri or any other dry scent, and seam neatly up, pressing it at the same time as flat as possible. Cover this with your bead work, and stitch it neatly and strongly all round, and your scent bag is finished.

For fringe, thread with blue beads, about an inch and a half in depth, previously fastening your needleful securely to the edge of the bag, and inserting the needle through the side; sew the loop firmly down, then thread again with white to the same depth; twist this twice within the blue, and sew down as before. Continue in alternate loops of blue and white until the fringe be completed all round, always taking care that the loops are of the same length.

For Bead Purses, commence precisely in the same way. Make a chain the requisite length, unite them, work round until you have it the desired depth. Draw one end quite close, fringe the other, and run a narrow cord, ribbon, or chain, just below it; then, with about a dozen loops to match the fringe, form a tassel, which fasten securely at bottom of purse.

Scent Jars, for a Room.—The following ingredients will make a delightful and not oppressive perfume for a sitting-room:—Gum benjamin, storax, sweet orris, nutmeg, and cloves—of each, one ounce—all bruised in a mortar; throw in a handful of bay-salt—at the bottom of a large ornamental jar—mixed with some of the spices; then lay in flowers, and, upon every layer of flowers or herbs, a handful of bay salt and the rest of the spices. No more spices need be added to the jar, but fresh salt as long as you put in fresh flowers; and, as the flowers blow at different times of the year, you must collect them as they appear to have attained perfection, pick them clean from their stalks, and cut the herbs. The best flowers for a scent jar are violets, roses, sweetbriar, thyme, lavender, rosemary, clove, pinks, sweet marjoram, geranium flowers and leaves, and sweet-scented verbena. Keep the jar close shut for three months; and, on opening, it will require to be well stirred up with a small wooden spoon, and will be found to

possess a delightful odour. Every sweet-scented flower or herb should get a place in the jar.

School Clothing.—In all matters of clothing there are only two things to be taken into consideration—beauty and utility. The corset for childhood must be easy, *elastic*, and so constructed as to support the other clothing. It must have no bones in front; the shoulder straps must be wide and elastic, and so constructed as to press upon the points of the shoulders, fastening at the same time far down in the back, and in this way drawing back the shoulders and giving prominence to the chest. The under-clothing must be fastened on to the corsets by buttons, and never be tied up with strings, which cut and compress the body.

The reason for this is to be found in the structure and functions of the heart, lungs, and digestive organs, and the absolute necessity there is for giving freedom to the chest and abdomen. It should never be forgotten by those who educate and have the care of children, that all the forces by which they reach maturity are internal, and are always rushing towards the external world for nutrition. Hunger, thirst, and respiration are incessantly laying hold of the material to supply the stomach market with goods; while the senses are always appropriating the ideal aspects of nature and transmitting them to the understanding.

Next to the corset and under clothing, the frock claims our attention. Two things are to be noticed in this; first, that it should fit well over the shoulder; and, second, that the material should not be thick and heavy enough for an adult, and have an additional load of flounces. It is not uncommon to see a child with a frock so low in the neck that it falls over the shoulders and rests upon the arms just below. Nothing could more tend to produce a contracted chest and round shoulders than this; and yet this fashion is still much persisted in.

Precisely in accordance with this dress is the gait and habit that is imposed with it. Children, when free in their dress and motions, like to run, skip, and jump along the streets and lanes, like other young animals; but this would be vulgar in Miss Patent-leather, and hence she is expected to walk through the streets with her hands on her waist, as soberly as a maiden aunt of forty, who has turned serious since her last disappointment.

A dress such as we have been describing possesses every qualification for inducing a curvature of the spine. During much of the time that they are in school, and more especially whilst drawing and writing, children must bend their shoulders in order to perform their work; but when they rise out of that position they should be perfectly free, for to tie their arms down by an ill-contrived frock is to keep them bent—is to cause a permanent deformity. We wish to impress it upon the teachers and parents that, in this matter, it is not simply the form and beauty of the child that are interfered with, but health, happiness, and even life itself are at stake.

The weight of the clothing is another important matter in the child's health and comfort. The weight should be properly distributed over every part of the body. It should be as light as possible; but even a weight of a few ounces may be quite enough to cause a yielding, if the pressure be permanent, upon some particular part; besides, it has a tendency to induce a shuffling and uneasy habit.

It requires an artist to dress a child well, so far as beauty is concerned, because it needs an appreciation of form, colour, temperament, and a number of other niceties, to adapt the dress to the wearer; but ease, comfort, and utility are within the reach of all who are not too vain to approve of them. The child must always be upright, free, and able to move its limbs in any direction, and if it cannot do this the dress should be thrown on one side, for the child should not be punished by compelling it to wear a badly-fitting garment. Bear in mind that health is the fabric of the child, and education only the ornament which is to adorn it.

Scotch Oatmeal.—See *Oatmeal.*

Scripture Measures, &c.

Cubit	= 21⅞ Inches.
Furlong	= 243 Yards.
Sabbath Day's journey	= 2 Miles Eng.
Hin (liquid measure)	= 10 Pints.
Homer (dry measure)	= 16 „
Mite	= $\frac{1}{10}$d. English.
Jewish Penny	= 7½d.
Shekel of Silver... ...	= 2s. 4½d.
„ Gold	= £1 16s. 5d.
Talent of Silver ...	= £352 17. 6d.
„ Gold	= £5,437 10s.

Sea, The.—The surface of the sea is estimated at 150,000,000 of square miles, taking the whole surface of the globe at 197,000,000, and its greatest depth is supposed to be equal to that of the highest mountains, or four miles; but La Place thinks that the tides demand an average depth of three miles, therefore the sea contains 450,000,000 of cubic miles of the 258,000,000,000 in the whole globe. The Pacific Ocean covers 78,000,000 of square miles; the Atlantic, 25,000,000; the Indian Ocean, 14,000,000. The Southern Ocean, to 30 deg., is 25,000,000; the Northern Ocean, 5,000,000; the Mediterranean, 1,000,000; the Black Sea, 170,000; the Baltic, 175,000; the North Sea, 160,000.

Sea-Bathing, Advice on.—Common and simple as sea-bathing appears to be, it is a very powerful agent for good or evil. The shock which all experience on first going into the water is communicated to the system at large, and the first symptom of it is a gasp, partly nervous, and partly the consequence of the sudden revulsion of blood to the internal organs, lungs and heart especially. In a strong, healthy person, the first shock is quickly succeeded by a reaction, this reaction being the natural effort of the system to restore the balance of circulating and nervous power. According to your power of reaction should be your exposure to the sea-water, for on that greatly depends the benefit that you are likely to derive from your bathing. If you come from your bath cold, blue, and pinched-looking, your fingers white and dead, and your teeth chattering, and for the rest of the day you are, probably, languid, sleepy, and miserable—these evidences should be taken as warnings. A strong person, and a swimmer, may stay in the water for twenty minutes, even longer, and retain his power of reaction; but for some persons two or three minutes' immersion, or even a single plunge, is quite as much as they can bear, at least at first and until they have gained strength by their residence at the seaside. Even if the shortest possible dip is not followed by a healthy glow upon the skin, and sensations of exhilaration and increased power, it is better not to repeat it for a few days. "The want of reaction," says Dr. Thomson, in his "Health Resorts," "is the abstraction of caloric or animal heat. There are, however, other circumstances beyond the constitution of the individual to be taken into consideration with respect to bathing agreeing or not; and these are such as increase or mitigate the depressing effects. Thus, a person who could not bathe on a tolerably cold day, might do so in the height of summer, and especially in those low, sandy shores where the water becomes raised in temperature by passing over an extent of sand previously heated by the sun; the water in such situations being warmer than on a rocky or steep, shingly shore. Again, the time of day for bathing may make much difference. The reactionary powers of the system are at their lowest in the early hours of the morning, and the chances are, that a person not quite strong, with whom a bath later in the day would agree perfectly, is, after a 'morning dip,' thoroughly depressed, languid, gaping, and good for nothing. The same may be said of those who go into the water suffering from fatigue. Equally injurious, and, indeed, dangerous, in full habits, is bathing after a full meal, such as dinner; violent determination of blood to the head, or even apoplexy has been the result of such an imprudence. At least three hours ought to elapse, and in persons of full habit, or of slow digestion, a longer period, before going into the water. The best time for bathing, however, is the forenoon, from two to three hours after breakfast. Of course it will be said that in many places you must wait for the tide, and take its time for your bath; but

equally true is it that the fact of the tide will not alter the fact of your bodily laws, and if, therefore, to suit the tide, you *will* bathe soon after dinner, you must risk the consequences. If your open sea-bath is of such consequence that you *cannot* miss it, and if the place is such that you *must* wait the tide, then you had better regulate your meal accordingly; take something light and nutritious: a cup of beef-tea, if you are an invalid, with or without a little wine, and make your dinner later. As a rule it is not good to alter meals thus, but it is better than bathing with a full stomach. A fit of indigestion is a very probable sequel to dinner and bath in close proximity. As we said before, sea-bathing is a most potent agent for the restoration of health, and for the cure of some forms of disease; but then, like other powerful instruments, it should not be employed as it is, rashly and ignorantly, both as regards mode and general adoption. Do not fatigue or over-heat yourself before going into the water, neither run into the opposite extreme, as some do, who, afraid of going in too warm, loiter about till they get chilled. Having undressed, do not stand hesitating and shivering before you take the plunge or dip, but in at once, whilst the warmth is still on you, and overhead as quickly as you can. If it is your first experiment in sea-bathing, two or three dips and out again is all you should have, and you will thus test your powers of reaction. If you do not experience any of the symptoms of depression before enumerated, you may feel sure your bath has agreed, and you may gradually extend the time of your remaining in the water to seven or eight minutes. Bathing in the open sea is neither beneficial nor safe for the aged; and, indeed, after forty years of age, we think the generality of people do well to leave it alone; this, however, is a matter of opinion. The small reactionary powers of the evening of life that is—after sixty—are not calculated to restore the abstracted heat. If old persons must bathe, they should never do so without a second person at their side. We will suppose that you have had your bath, and that it has agreed tolerably well with you; walk quietly home, and rest a short while before eating such a meal as dinner, give the system time to recover from the unusual disturbance, take up some light reading, or if you like it better, lie down for ten minutes. If you are in the least depressed, a cup of tea, a small quantity of soup, or a little wine and water, may be of service, and will facilitate the digestion of the common meal. At certain periods of the female constitution, bathing is of course quite inadmissible, and it is a question whether it is safe during pregnancy: certainly not without medical sanction. Again, persons afflicted with disease of any kind, whether functional or organic, who without similar sanction indulge in open sea-bathing, do a most imprudent and dangerous thing. There are two or three minor inconveniences which occasionally result from sea-bathing, of which it is well to warn the bather. One is a peculiar red rash, which is apt to prove troublesome. With some it only comes out for a few hours after the bath; with others it is troublesome for a few nights, interfering with rest; whilst, with a few, it so continues, and is so painfully aggravated after each immersion, that it compels those who suffer from it to give up bathing. It is a peculiarity of skin, and cannot be rectified, though sponging with fresh water, after the sea-bath, may in some degree modify it. The effect upon the skin might make us expect some influence to be exerted upon the hair; it does at times fall off a little at first, but this does not go on, and the permanent effect is rather to strengthen its growth. Ladies have a great dread of sea-water on the hair, but without cause. The slight dryness produced is easily remedied, and the oil-skin bathing cap is better dispensed with. As to children, some enjoy the sea-bath from the first, and, if strong and healthy, can undergo a vast amount of water-cooling without injury. But delicate children, especially those who are ordered sea-bathing for scrofulous or other diseases, must be more carefully regulated. As to very young children, that is to say, till teething is over, they are better out of the open sea entirely."

Sea Shells, To Polish.—This requires much care and experience. The shells are burned to get rid of the animal matter that remains in them. Their rough outside is next removed by mechanical means. They are then carefully treated, some with nitric, others with muriatic acid, according to their nature, until the proper surface is reached. This is then polished by friction, with leather and the hand. The unpractised in the art of conchological manipulation, we recommend, should send their shells to a regular practitioner; for if great care is not bestowed on them, the shells are in danger of being spoilt.

Seas, Bed of the British.—M. Delasse recently laid before the Academy of Science a large map of the various beds of rocks constituting the bottom of the British seas. This bottom chiefly consists of sand, slime (more or less mixed with sand) and different stones. The latter, already consolidated, are anterior to the present period, and do not receive deposits. They stretch far into the sea, from the north-west coasts of Scotland, the Orkneys, and the Hebrides; they also exist at the mouth of the Shannon and the north-west coast of Ireland. In the British Channel they mark the junction of Cornwall with Brittany. They also mark those of the Isle of Wight and Portland with the Cotentin. To the east of England these stony formations are hardly to be met with elsewhere than at the mouth of the Tees and in the direction of Flamborough Head. They generally form the bottom of the straits and friths that are washed by rapid currents. Shifting deposits are large in proportion to the rapidity of the waters that have borne them. The most important consist of sand, which occupies immense space on the Atlantic coast, the British Channel, and the German Sea. Gravel deposits, which are not extensive, are to be found on the western coasts, in the Bristol Channel, between the Land's End and the Scilly Islands, and south of Cork. Flint shingle borders the white cliffs of England, and it is also met with in the German Sea, in the latitude of the Orkneys. Slimy deposits are peculiar to the mouth of the Thames, Southampton Water, Torbay, and the Irish coast of St. George's Channel. At various points of the coast there are marine deposits of molluscs and shell-fish. They are somewhat rare on the eastern coast of England and the southern one of Ireland, but very frequent in the Irish Sea and all round Scotland, especially in the Minsh and between the Orkneys and Moray Frith.

Sea Water, Internal Use of.—The principal salt in sea water is chloride of sodium, or common salt. Iodine and bromine are its most peculiar ingredients. Iron, too, occurs in small proportion. The muriate of lime, the iodine, and the bromine are, however, apart from its purgative qualities, the agents which exert the most undoubted effects upon the constitution when sea water is used as a medicine internally. The usual dose of sea water is half a pint, repeated once or twice, according to effect. In worms, both when drank or used as an enema, sea water is often useful. Sea water has been frequently taken in habitual costiveness, particularly by those of full habit who lead a sedentary life. In this instance its stimulating properties are as useful as its purgative qualities.

Sea-Weeds, Directions for Collecting and Laying-out. — The sea-weed collector must bear in mind that if exposed to the sun or rain, the plants, as a general rule, soon change colour. The gleaner should, therefore, always seek for them at low tide, in pools among the rocks, where the finest specimens may be found. It should also be noticed whether they were found growing from, or attached to the rocks, or whether they were accidentally left there by the falling tide. Specimens which are found attached to the rocks will almost invariably be the most perfect; and care should be taken to obtain the entire plant, raising it by the tendrils with which it holds to the stone. When gathered, the sooner they are laid out the better. Miss Gifford, eminent as a marine botanist, gives the following clear instructions:—"First wash the sea-weed in fresh water" (some collectors give preference to clean salt water, or water

and salt, where sea water is not obtainable), "then take a plate or dish, the larger the better; cut your paper to the size required, place it on the plate with fresh water, and spread out the plant with a good-sized camel-hair pencil in a natural form (picking out with a pin gives the sea-weed an unnatural appearance, and destroys the characteristic fall of the branches, which should be carefully avoided); then gently raise the paper with the specimen out of the water, placing it in a slanting position for a few moments, so as to allow the superabundant water to run off; after which place it in the press. The press is made with either three pieces of board or pasteboards. Lay on the first board two sheets of blotting-paper; on that lay your specimens; place straight and smooth over them a piece of old muslin, fine cambric, or linen; then some more blotting-paper, and place another board on the top of that, and continue in the same way. The blotting-paper and the muslin should be carefully removed and dried every day, and then replaced; at the same time those specimens that are sufficiently dry may be taken away. Nothing now remains but to write on each the name, date, and locality. You can either gum the specimens in a scrap-book, or fix them in, as drawings are often fastened, by making four slits in the page, and inserting each corner. This is by far the best plan, as it admits of their removal, without injury to the page, at any future period, if it be required, either to insert better specimens, or intermediate species. Some of the larger algæ will not adhere to the paper, and consequently require gumming. The following method of preserving them will be found one of the best:—After well cleaning and pressing, brush the coarser kinds of algæ over with spirits of turpentine, in which two or three small lumps of gum mastic have been dissolved, by shaking in a warm place; two-thirds of a small phial is the proper proportion, and this will make the specimens retain a fresh appearance."

Seal in Wax, Impression of a.—Few persons can take a perfect, or even a good impression of either a stone or a metal coin. The principal cause of failure arises from placing the seal or coin quite cold upon the melted wax; the cold stone "sets" the wax before it can enter the fine lines of the work.

Metal coins, being better conductors of heat, act in this way even quicker than stone. The first thing to do, therefore, to obtain a good impression, is to warm the seal or coin before it is placed upon the sealing wax. The proper heat is about that which can be borne upon the cheek without inconvenience, when they are placed there "to feel them." There are also two other points to consider in taking an impression: one is to prevent air being enclosed under the seal; the other, to have the wax neither too thin nor too thick. To prevent air being enclosed, place the seal or coin on the wax with a diagonal motion, and not, as is often the case, with a horizontal thrust. The reason for this practice is, that if the seal be suddenly laid flat on the wax, the little air within the engraved parts cannot escape, and, being expanded by the hot wax, makes a vexatious "bubble" at a part most desired to be perfect. A deep-cut shield is very liable to enclose an air bubble. To avoid it, place one edge of the seal into the wax, and then quickly lower it to a horizontal position, exerting great pressure before the seal be let go.

In practice the seal is not to be snatched off immediately, but time must be given for the seal and the wax to cool. The seal should then be lifted off with the same kind of diagonal motion as it is put on—that is, one side is to be lifted first, then gently raise it. If lifted quite perpendicularly, the seal acts to the wax like a schoolboy's leather sucker does to the stone; rather than leave it, the weaker of the two (the wax) gives way in part from the base, caused by the well-known pressure of the atmosphere. Wax impressions are made better on card than on paper. And now we touch the second point. To have the impression in a good condition, first warm the card, holding it about half an inch above the wick of a well-snuffed candle. Now melt the wax gradually, not by putting the wax into the flame—for by so doing,

black, streaky impressions are obtained—but by holding the wax just at the top point of the flame, at which place there is more heat than in the flame. When the wax is sufficiently melted and nearly ready to drop, place the fluid portion on to the card; moving the fluid wax from the stick with a circular motion. Twice melting is almost certain to be enough; Take care, however, to spread the wax out to the full size of the impression required.

In taking a copy of a coin, it will be difficult to do so perfectly, unless one side be fixed to a temporary handle. This can be done by making a wooden handle, and fixing the same to the reverse side with sealing wax. Cut a short wooden handle, make one end hot, then put melted sealing wax upon it; next warm the coin and put sealing wax upon it; now warm the two, and weld the wax together. When cold enough, the impression can be taken. Never wet or damp a seal before taking an impression; the hot wax converts the water into steam, and is sure to spoil the impression. (See *Glass Seals, &c.*)

Seed.—The great naturalist Cuvier thought that the germs of all past, present, and future generations of seeds were contained one within the other, as if packed in a succession of boxes. Other learned men have explained the mystery in a different way. But let them explain it as they will, the wonder remains the same, and we must still look upon the reproduction of the seed as a continual miracle.

Is there upon earth a machine, is there a palace, is there even a city, which contains so much that is wonderful as is enclosed in a single little seed—one grain of corn, one little brown apple-seed, one small seed of a tree—picked up, perhaps, by a bird for her little ones—the smallest seed of a poppy or a blue-bell, or even one of the seeds that float about in the air, invisible to our eyes? There is a world of marvels and brilliant beauties hidden in each of these tiny seeds. Consider their immense number, the perfect separation of the different kinds, their power of life and resurrection, and their wonderful fruitfulness!

First, then, dwell upon their number. About a hundred and fifty years ago, the celebrated Linnæus, "the father of botany," reckoned about 8,000 different kinds of plants; and he then thought that the whole number existing could not much exceed 10,000. But a hundred years after him, M. de Cundolee, of Geneva, described 40,000 kinds of plants; and at a later period he counted 60,000, then 80,000, and he supposed it possible that the number might even amount to 100,000.

Well, let us ask, have these 100,000 kinds of plants ever failed to bear the right seed? Have they ever deceived us? Has a seed of wheat ever yielded barley, or a seed of a poppy grown up into a sunflower? Has a sycamore tree ever sprung from an acorn, or a beech tree from a chestnut? A little bird may carry away the small seed of a sycamore in its beak to feed its nestlings, and, on the way, may drop it on to the ground. The tiny seed may spring up and grow where it fell, unnoticed, and sixty years after it may become a magnificent tree, under the shade of which the flocks of the valleys and their shepherds may rest.

Consider next the wonderful power, life, and resurrection bestowed on the seeds of plants, so that they may be preserved from year to year, and even from century to century.

Let a child put a few seeds in a drawer and shut them up, and sixty years afterwards, when his hair is white and his step tottery, let him take one of those seeds and sow it in the ground, and, soon after, he will see it spring up into new life, and become a young, fresh, and beautiful plant.

Some years ago a vase, hermetically sealed, was found in a mummy-pit in Egypt by Mr. Wilkinson, who sent it to the British Museum. The librarian there having unfortunately broken it, discovered in it a few grains of wheat and one or two peas, old, wrinkled, and as hard as stone. The peas were planted carefully under glass on the 4th of June, 1844, and at the end of thirty days, these old seeds were seen to spring up into new life. They had been buried probably about 3,000 years ago (perhaps in the

time of Moses), and had slept all that long time apparently dead, yet still living in the dust of the tomb. (See *Electricity and Seeds.*)

Servants, Domestic.—Servants are too often looked upon as beings of an inferior order, and treated accordingly. This is a great mistake. We should endeavour to think charitably of our servants, for we know not what circumstances may have made them; rather let us try to bring out their better nature, by sympathising with their troubles, and showing them that they are cared for, and by good example lead them to better things.

Much firmness, patience, prudence, and benevolence is necessary in our intercourse with servants. If a mistress is not firm in requiring strict obedience to her reasonable orders, and attention to the daily domestic duties of her household from her servants, she is precisely like a workman endeavouring to split wood with the blunt end of a wedge.

We were once unwilling listeners to a long conversation between three ladies on the daily persecution they appeared to be suffering from their heartless tormentors. These three ladies seemed to us to be good representatives of three classes of housekeepers: the first of that formidable body, the good managers; the second, of those amiable, easy-going mistresses, so greatly imposed upon; and the third, of the class of pleasure-seekers.

The first, it seemed, was continually being insulted and forsaken by her maids; the second could not manage hers at all, although, she declared, they were indulged in every possible way—they proved the most ungrateful creatures; and the third lady's case seemed still worse than the others. Now servants have feelings which one lady habitually forgot when she scolded and worked hers without intermission: they require *firm discipline*, which our second friend did not see, and they also require *attention*, which a pleasure-seeking mistress can neither afford her children nor servants.

No doubt domestic servants have many faults—who has not? but if mistresses of families would, in an *earnest* and *proper* spirit, direct their energies to improve them, what happy results might follow! Servants should be taught to feel that their interests are dear to their employers. Rules there should be which should not be broken through—when necessary, reprove them kindly, endeavouring to point out their faults clearly, although without being ruffled in temper—they should have innocent recreations as far as it lies in your power to procure enjoyment for them. In every kitchen we would have a case of well-chosen books, amusing, moral, and instructive; if ignorant in household work, they should be instructed in the method.

"Masters, give unto your servants that which is just and equal; knowing also that you have a master in heaven;" and "servants, obey in all things your masters according to the flesh; not with eye-service, as men-pleasers, but in singleness of heart, fearing God." If these precepts were more generally followed, we should hear fewer complaints of bad servants, and instead of the "greatest plagues of life," they would often be regarded as one of the blessings of existence, and a necessary appendage to a happy home.

Never speak harshly, or superciliously, or tauntingly to, or of, a dependent; this shows meanness of heart and mind. Command your temper before them, that they may not take advantage when you lose self-possession; "He who would command others must first command himself." Servants, as enemies, may do you much harm; as friends, much good; treat them as friends, then, for it is well known that the most effectual manner of making any one your friend is to treat him as such.

Avoid familiarity and severity with your servants; be just and merciful in your exactions of service, and straightforward with them on all occasions. On no account should the truth of a servant's word be questioned, unless experience bids you not believe them. Insist on "punctuality" and "economy," as, if this is not adhered to, there is a great loss of time and money. A mistress cannot be too strict in having

order in her house; see that the work is done *first;* then, if there is time, let them spend it in some profitable employment, as sewing, or reading some book which will improve their minds.

There are many training schools for servants, and occasionally, no doubt, a mistress may be fortunate enough to secure a truly excellent domestic; but the supply is totally inadequate to the demand. A really good maid-of-all-work is also more difficult to find than any other description of female servant. If a mistress have health, time, and patience, the only way seems to be to train her servant herself; she must consider the girl as a *pupil,* and make her strictly amenable to *rules,* from which, as we have said before, no departure should be permitted; her work must be *arranged,* every duty being performed in regular order. It is insufferable to find your servant scrubbing the stairs after tea, attending to the chamber department late in the day; washing up the breakfast and tea things together; cleaning her pots and pans when she ought to be putting them on the fire, and setting on the teakettle when it ought to be boiling.

Daughters should be brought up to be enabled properly to train servants. Women may be accomplished and well read, and yet not be permitted to ignore the honourable culinary art, nor suffer them—

"Standing with reluctant feet,
Where the brook and river meet,"

of the most excellent mysteries of housekeeping—darning and contriving. A race of good mistresses *might* improve the present wretched style of domestic servants.

Servants, To Hire.—Good servants, as a rule, do not resort to registry offices when they are in want of situations; nor have they any occasion to. Their character is a sufficient advertisement for them, and they seldom remain long out of service. It is better to enquire for them, either amongst your circle of friends and acquaintance, or from any respectable tradespeople you may employ, who generally know those in the neighbourhood who are out of place; and when your wants are made known you will find applicants enough. The great object should be to have servants who have lived in respectable and regular families, and whose habits have been so well formed that they may have but few that require improvement.

Shadow Guess, Game of.—A sheet or white table-cloth is hung upon a screen, after the manner of preparations for a magic lantern, the blind man (as we may call him, for the sake of distinction) is seated on a stool, low enough to prevent his shadow being thrown on the sheet before him. At some distance behind him a lighted candle is placed, all the other lights in the room being carefully extinguished.

These preparations being concluded, all the members of the company form themselves into a sort of procession, and pass, one after the other, between the blind man (who is not allowed to turn his head round as much as an inch) and the table whereon the candle is placed. This produces the effect intended. The light of the candle, intercepted by the forms passing before it, throws on to the sheet a profile shadow of each.

As these shadows pass before him in succession, the blind man is obliged to declare aloud the name of the person to whom he imagines the shadow belongs; the mistakes he falls into causing considerable amusement among the players.

It is scarcely necessary to say that each, in passing before the light, takes all possible pains to disguise his appearance, his height, and his walk, so as to prevent recognition.

Forfeits are paid by the players whose portraits may be recognized.

Shallot.—This vegetable has a strong but not unpleasant smell, and is therefore generally preferred to the onion for various purposes of cookery, and for making high-flavoured soups and gravies. They are also much used in pickles, particularly in the East Indies, and are considered by many epicures to be the best seasoning for the old English dish of beef-steaks. The shallot was first brought to England in the year 1548; and we may safely conjecture that

it soon found its way to the breakfast-table of Queen Elizabeth.

The soil best adapted for growing the shallot is a light, rich, sandy loam; but as such soils, perhaps, are scarce, any light, dry soil that has been manured a year or two before will do. They are propagated by dividing the clustered roots into separate offsets, and planting them in very shallow drills in February or early in March.

Sharpening Edge Tools.—The simplest method of sharpening a razor is to put it for half an hour in water, to which has been added one-twentieth of its weight of muriatic or sulphuric acid; then lightly wipe it off, and, after a few hours, set the razor on a hone. The acid here supplies the place of a whetstone, by corroding the whole surface uniformly, so that nothing further than a good polish is necessary. The process never injures good blades, while badly-hardened ones are frequently improved by it, although the cause of such improvement remains unexplained. The mode of sharpening here indicated would be found especially advantageous for every description of edge tools.

Shawls.—The shawl is an article of dress so universally worn that a description of it here is scarcely needed; there are, however, some considerations and particulars respecting it which may be new and interesting to our readers; we therefore give them. In the East we find that the shawl is generally used by persons of both sexes; it is worn by both, either as a mantle or a girdle, or it may form the folds of the turban, and sometimes it serves as a carpet to sit or lie upon. It is made commonly of woollen stuff, and wrought into some pattern or device, although sometimes it may be all plain except the border. The women of both Europe and America wear it as a loose body-covering or neckerchief, according as the size is large or small. The use of a vestment under the name of shawl in Europe belongs almost entirely to the present century.

The passion for shawls, among all women everywhere, is remarkable. In one country the shawl may flow from the head like a veil; in another it hangs from the shoulders; in another it is knotted round the loins like a sash; in yet another it is swathed round the body like a skirt. Wherever worn at all, it is the pet article of dress. From a time beyond computation the sheep of Cashmere have been cherished on their hills, and the goats of Thibet on their plains, and the camels of Tartary on their steppes, to furnish materials for the choicest shawls. From time immemorial the patterns which we know so well have been handed down as a half-sacred tradition through a Hindoo ancestry which puts even Welsh pedigrees to shame. For thousands of years have the bright dyes, which are the despair of our science and art, been glittering in Indian looms, in those primitive pits under the palm tree, where the whimsical patterns grow like the wild flowers springing from the soil. For thousands of years have Eastern potentates made presents of shawls to distinguished strangers, together with diamonds and pearls.

At the Russian court ladies judge each other by their shawls as by their diamonds. In France the bridegroom wins favour by a judicious gift of this kind. In Cairo and Damascus the gift of a shawl will cause as much heart-burning in the harem as the introduction of a new wife. The Paris grisette and the London dressmaker go to their work with a little shawl pinned neatly at the waist. The peasant's daughter buys a white cotton shawl with a gay border for her wedding. The maiden aunt, growing elderly, takes to wearing a shawl, in midwinter; and the aged grandmother would no more think of going without it, any season, than without her cap.

Respecting Cashmere shawls, we learn that the fine wool of the Cashmere goat is shorn in the spring, shortly before the warm season, the time when the animal, in its natural state, seeks thorns and hedges, in order to free itself from the burden of its warm covering. All the hard and long hairs are picked out most carefully. The wool thus purified is first washed in a warm solution of potash, and afterwards in cold water, in which

process felting must be carefully avoided. It is then bleached upon the grass, and carded for spinning.

The shawl wool is three times dyed—before carding, after spinning, and in the wool.

The Asiatics avoid spinning the wool hard, in order that the shawls may be soft. They use a spindle which consists of a ball of clay, with an iron wire attached. The finger and thumb of the spinner are kept smooth by steatite powder. A large shawl of the finest quality requires five pounds of wool; one of inferior quality, from three to four pounds. About 80,000 shawls are made yearly, in 16,000 looms, each of which employs three workmen.

The Cashmere goat has been introduced into France, England, South Carolina, and Tennessee. The value of the flock may be estimated from the fact that no real Thibet goat has ever been sold for less than £250. This enormous price, moreover, is not, as might be imagined, a speculative one, for no fleeced animal has wool of such fineness, softness, and durability.

The prices paid for Cashmere shawls, or those woven in India, have sometimes been almost fabulous. A full-sized shawl, such as is called in America a long shawl, ordinarily commands in Paris or London from £100 to £1,000. Scarfs and square shawls, being smaller, sell for less. It is a mistake, however, to suppose that all these shawls are manufactured in India in the shape in which they are sold here. Generally, indeed, the centres and borders come out separately, and are put together afterwards in sizes and patterns, to suit customers. Moreover, a large portion of the shawls sold as real India ones are actually made in France; for the Thibet goat was introduced into that country more than thirty years ago, and the Cashmere shawls imitated with considerable skill. Judges of the article pretend to say, however, that the real India shawl can be detected by its having a less evenly woven web, as also from its brighter colours. It is likewise said that the border of the genuine Cashmere shawl is invariably woven in small pieces, which are afterwards sewn together, as the whole border is subsequently sewn on to the centre.

A real Cashmere shawl, made by the inhabitants of that Indian valley, from the wool of a peculiar variety of goat, reared on the plains of Thibet, is a most costly article. To make a pair of large and handsome Cashmere shawls requires the labour of fourteen men for half a year. The down is collected from flocks of goats on the plains of Thibet, and brought to the confines of Cashmere on the backs of sheep. It is then cleaned, and one-fourth of it (being all that is fitted for the shawls) is carried on men's backs the remainder of the distance to Cashmere. When arrived thither, it passes into the hands of the merchants who sell it in small quantities to the weavers, at the rate of about two rupees per pound. The thread is dyed a great variety of colours, and then stiffened with rice water. Many articles are woven with these coloured threads, the process being slow and tedious, on account of the rude construction of the looms. Shawls, coverlets, handkerchiefs, turban pieces, gloves, socks, and other garments, are woven of this down, or *poshm*. The shawls are washed after being woven, to remove the rice stiffening; and a fine pale yellow colour is imparted by means of sulphur fumes.

With regard to shawls of British manufacture, we may state that the superfine *Thibets* or *Cashmeres* made at Huddersfield, and sold at about a guinea per yard, are equal in delicacy and softness of texture to those imported from the north of India.

Shawls which require borders are supplied with them in London, the borders being made of all patterns at Paisley, Edinburgh, and Norwich, at those places borders being a considerable and particular branch of manufacture. A good Paisley shawl is now almost as highly valued as a real Cashmere.

Shawl-stitch.—See *Patching*.

Shells.—A collection of shells is a beautiful and surprising sight: beautiful, since more exquisite samples of elegance of form and brilliancy of colour cannot be found through the wide range of natural objects, whether organized or

inorganized—surprising when we consider that all these durable relics were constructed by soft and fragile animals, among the most perishable of living creatures. Still more surprising is such an assemblage when we reflect upon the endless variation of pattern and sculpture which it displays: for there are known to naturalists more than 15,000 perfectly distinct kinds of shells. Every one of these kinds has a rule of its own, a law which every individual of each kind, through all its generations, implicitly obeys. Thus there is a liberty to vary given to some, whilst others are rigidly bound by immutable laws of the utmost simplicity; but to none is allowed the licence to depart, unless in the exceptional case of useless and abnormal monstrosities, from the law of its specific organization. The researehes of the naturalist have made him conversant not merely with the fact of these myriads of modifications of the type of the molluscous shell, but also with the laws obeyed by whole groups of forms, and the principles which may be evoked from the careful and minute study of species and genus. Thus, a science arises out of a knowledge of conchological details, and truths are elicited which bear importantly upon the elucidation of the laws of life and being throughout organized nature.

The formation of the shell itself is but an example of a process at work equally in the animal and vegetable kingdoms. A shell, whether simple or complicated in contour or colour, is the aggregate result of the functional operation of numberless minute membraneous cells, the largest of which does not exceed one hundredth of an inch in diameter, and, in the majority of instances, is less than one thousandth of an inch. In the cavities of these microscopic chambers is deposited the crystalline carbonate of lime, which gives compactness to the beautiful dwelling-house, or rather coat of mail, that protects the tender mollusc. How astonishing is the reflection, that myriads of exactly similar and exceedingly minute organs should so work in combination that the result of their labours should present an edifice rivalling, nay even exceeding in complexity, order of detail and perfection of elaborate finish, the finest palaces ever constructed by man!

Shopping.—Always remember a shop is a public place; that you are speaking before, and often to, strangers—and therefore there should always be a certain degree of reserve in all you do and say. Never carry on any conversation with your companions on topics that have nothing to do with your shopping, and do not speak or laugh aloud; but despatch your business in a polite and quiet manner, equally removed from haughtiness and familiarity. Sometimes, in pressing you to buy their goods, young shopkeepers will become too talkative and familiar. Silence and seriousness are the best checks to this; and it should always be met with calm self-possession. If you have good manners you will very rarely meet with impertinence or rudeness. When ladies complain of being frequently annoyed in any such way, it is a sure sign that their own deportment is faulty. Self-possession and self-reliance are the result of a well-disciplined mind and cultivated manners, and persons possessed of them will always be equal to the occasion; their looks alone are sufficient to repress insolence. (See *Bargain-making* and *Marketing*.)

Shrove Tuesday.—This day is the herald of Lent, and has been from the earliest ages celebrated by feasting and merry-making. It is the concluding day of the time of Carnival, which in various Catholic countries is of greater or less extent, but celebrated with most distinction at Rome and Venice. The main distinction of Shrove Tuesday was the eating of pancakes, made with eggs and spice, and this custom still prevails.

Shuttlecocks. — Perhaps but few insignificant things are productive of so much pleasure amongst children as the shuttlecock—its use is universal. It is a joyous sight to see a whole streetful of children plying their little limbs and counting the number of times that they can keep their plaything in the air. Then see what employment these toys give to the very poor! One quill merchant in Manchester sold not fewer than two

millions of feathers for the making of shuttlecocks, and probably other persons in the place sold an equal number. They are mostly disposed of to poor, industrious persons—who take them to their homes, and dress and prepare them for the shuttlecocks. During the busy season some of them work eighteen hours a day. The wooden bottoms are purchased from the turners; and the shuttlecocks when complete are made into bundles of twelve each; these again into *gross* bundles containing 144 in each, and thus disposed of to wholesale dealers and small shopkeepers. Manchester supplies the district for twenty miles round; and to places within this distance the poor makers will carry them on foot for sale. The kind of feather which is used is a very small goose quill, formerly made into pens, but now displaced by metallic rivals. If they are not very white they are dyed, and so but few are wasted. The number of feathers in each shuttlecock varies from five to eight, the average being six; so that the number of quills above mentioned will make about half a million of these juvenile flyers.

Sick Person, How to Hold.—Never grasp the invalid, or support any part of the body with the tips of your fingers, but with the whole breadth of your hand laid smoothly on the skin. If you use the finger-ends for holding any weight, they will press and dig into the patient's flesh, causing him or her great discomfort, particularly if the part be at all inflamed; but if your whole hand, with the fingers a little spread out, divide the weight over its surface, no discomfort, or as little as possible, is produced.

Sick-Room, Value of Flowers in the.—From the presence of flowers in an invalid's room a great advantage is derivable. Flowers are very beautiful and very welcome during seasons of health. A stroll through a well-kept garden, especially in the early morning before the dew has passed away, and when the richness of colouring, and the singular sensation of exuberant life, then particularly observable, are at their height; an hour spent in the depths of dingles and green glades, where the sun, shimmering through the broken boughs overhead, lights up for a moment wild blossoms nestling together amidst the mossy roots of the older trees, are delights that we all can appreciate thoroughly; but when the hour of sickness, of pain, of weariness comes, and we lie on our beds, feeling as though we should never know again what ease and health are, then it is that the quiet worth of our sweet friends the flowers is most truly recognized; then it is that the languid heart leaps up, the dull eye brightens, the pale lips call back their colour and their smile together to greet the gentle visitants, as the door opens to admit our old out-of-door comrades, who, undeterred by the uncongenial gloom and closeness, come to sympathise with us, to tell us that we are not forgotten in our former haunts, and that our steps will be gladly hailed there when strength is ours again.

Illness, looked at even in the most cheerful light, both by patients and nurses, is a wearisome experience. The same room, the same routine, the same diet, and the same medicines, taken at the same hours, are not by any means enlivening circumstances; clean, well-aired, cheery, as unlike a sick-room as possible as the chamber of suffering may be kept, yet there is, and always must be, a depressing feeling within it; something totally unlike itself is wanting to relieve its oppression, to give rise to new thoughts quite unconnected with it or its occupation. And to supply, as far as they can, this very need, flowers, tastefully arranged, and well placed, offer their kindly services. It is such a relief, such a positive luxury, to turn the eye away from the grim, bad-taste suggesting row of medicine bottles; from the sundry biscuit papers that stand on the table, ready to dispense their well-meant but painfully unpalatable contents; from the oft-conned pattern on the walls, one rose, two green leaves, a sort of proposal for a brown leaf, ending in a badly-formed piece of trellis, a white rose and a green leaf at top; from the window-curtains hung up in their perpetual folds; from the fire which, though partaking of a family resemblance with the dear old

one downstairs, evidently belongs to an ill-conditioned and ill-favoured branch of the original stock; to turn the weary eyes and weary attention from all these things, and rest them gently and peacefully on some spiritual-looking blossom, so unallied to all earthly trouble, so suggestive of coolness, and freshness, and unworldliness, that the tired brain and throbbing pulses become half-unconsciously soothed, and the heavy eyelids droop and droop lower, until, as pitying Sleep closes them fast, she transforms our last idea of our beautiful guest into that of the image of a guardian angel watching beside us and warding off all suffering from our pillow. And well may trustful, hopeful thoughts be suggested by our mute friends, either in their own simple forms, or in the glorified guise bestowed on them by our dreaming fancy—for what is the mission of it and its brethren?

"To comfort man; to whisper hope,
Whene'er his faith is dim,
For who so careth for the flowers
Will much more care for him."

(See *Fire in a Sick-room.*)

Signs, Good and Bad.—It's a good sign to see a man doing an act of charity to his fellows; it's a bad sign to hear him boasting of it. It's a good sign to see the colour of health in a man's face; it's a bad sign to see it all concentrated in his nose. It's a good sign to see an honest man wearing old clothes; it's a bad sign to see them filling holes in his windows. It's a good sign to see a woman dressed with taste and neatness; it's a bad sign to see her husband sued for her feathers and foolery, gems and jewellery.

Silk.—How long silk has been employed for purposes of clothing will never be certainly decided; we only know from the annals of history that silk-worms were bred, and silk textures woven nearly 3000 years before our chronology.

Owing to its soil and temperature, China is excellently adapted for silk breeding. The mode of carrying it on much resembles that employed in Europe. The Chinese let the silk-moths crawl upon sheets of white paper to lay their eggs. In cleaning the frames they employ the same method as ourselves, by spreading nets over the dirty spots, and laying leaves upon them. The caterpillars crawl through the meshes upon the fresh leaves, and are then easily removed.

The Chinese jealously kept the secret of silk breeding from other nations in the same way as they did all branches of industry and science for thousands of years. Silk was certainly known to foreigners through exportation, but merely fabulous reports existed as to its manufacture and the origin of the material.

The little creature to which we are indebted for silken attire is a caterpillar with twelve feet, which in due time becomes a moth. At its birth, and for ten or twelve days after, it is very dark, but as it grows it casts its skin, and becomes of a blueish white, and yellow when ready to spin. Before spinning it fasts about thirty-six hours, and becomes soft; and, having but a short time to live, it spins with the greatest industry for the space of two or three days. When enveloped in its cocoon, about a week is allowed to pass before the balls are gathered; they are egg-shaped, and more pointed at one end than at the other, and it is at the smaller end that the head of the aurelia is found, and makes its exit if not prevented in time by the manufacturer; for the coming out of the moth, of course, causes breaks in the threads of silk, so care is taken to kill great numbers of the little inmates before they begin to come forth. This is done by exposure to the heat of an oven. The moths which are permitted to come out appear in an exhausted state, and live only till they have deposited their eggs, which are gummed, as it were, together, sometimes to the number of 500, and are hatched in the following season.

The silk, or rather the origin of silk, is a fluid contained in bags, and it is sometimes *forced* out when threads of stronger and coarser quality are required, but the instrument by which the silkworm is enabled to spin it is very curious, and much like the machine of a wire-maker. When viewed through a microscope the silk appears flattened, and has a groove along each side, from which

we may infer that the threads come from each of the receptacles, and are joined by the worm as soon as they leave its body.

The length of silk reeled from a single cocoon is said by Count Dandolo to be sometimes 625 yards, and it has been stated that the produce of 2,800 worms, which have consumed 125 pounds of mulberry leaves, gives one pound of reeled silk, from which may be obtained sixteen yards of Gros-de-Naples.

As those cocoons which have been injured by the coming out of the moth cannot be reeled, they are spun, and the material is called *fleuret*. The raw silk, before it can be used in weaving, is twisted and converted into *singles*, tram, or *organzine*. The silk is hard when twisted or thrown, so it is boiled many hours in soap and water, and this it is which gives that soft and shining appearance, and enables it to take the dye.

The operation of winding off the cocoons is a very delicate one. The great point in winding, or reeling as it is called, is to make the thread of an equal thickness. Before reeling the natural gum must be softened; this is done by immersing the cocoons into warm water, in which they are generally stirred round with a birch-rod, to which the loose threads adhere—sometimes as many as thirty threads are collected; from this they are passed through a metal hoop, which rids the silk of all dirt and impurities. It is then passed to the reel and wound off. The silk, when reeled, is made up into hanks, and is ready for the market.

The silk harvest, as it may be called, lasts but six weeks, and affords the most rapid of agricultural returns; the only capital required being for the purchase of the leaves; but it can often be laid out to advantage in the purchase of the cocoons.

In England the culture of silk has proved a failure. It was first tried in the reign of Elizabeth, but without any successful result. Again, in 1713, silk weaving was attempted, and this time with better success; it was twentyfold what it was in 1664, and employed above a million of hands. This resulted from the fact that inventors busied themselves to improve it. Thomas Lombe constructed in 1719 a very complicated silk-spinning machine, which fitted a building a quarter of a mile long. Lombe received a reward of £14,000 from Parliament. In 1821 silk worth eight millions was worked up in England. The commercial crisis of the next twenty years, however, had a most injurious effect on the silk manufactures of England; and though there are still many silk factories at Manchester, Leeds, &c., the former wealth and prosperity of the silk weavers have been destroyed.

France, now, is the great European country for silk breeding and silk manufactures. In 1853 she produced sixty million pounds of cocoons in addition to the quantities of silk imported. In this year, however, a dangerous epidemic broke out among the silk-worms, and spread to such an extent that in 1857 the produce was only sixteen million pounds of cocoons.

A curious proof of the gradual spread of silk over the globe will be found in the similarity of the name given to it among the different nations:—

Corea	sic.
China	se.
Mongolia	sirkek.
Arabia	serik.
Greece	Σηφὶκον.
Roman	sericum.
Anglo-Saxon	siolk.
England	silk.
Denmark	silcke.
Sweden	silke.
France	soie, satin.
Median (Latin)	seda.
Italian	seta.

Silk and Velvet, To Keep.—Silk articles should not be kept in white paper, as the chloride of lime used in bleaching the paper will probably impair the colour of the silk. Brown or blue paper is better, and the yellowish, smooth India paper is best of all. Silks intended for dress should not be kept long in the house before they are made up, as lying in the folds will have a tendency to impair its durability by causing it to cut or split, particularly if the silk has been thickened by gum. Thread-lace veils are very easily cut. Dresses of velvet

should not be laid by with any weight on them, for if the nap of thin velvet is laid down, it is not possible to raise it up again. Hard silk should never be wrinkled, because the thread is easily broken in the crease, and it never can be rectified. The way to take the wrinkles out of silk scarves and handkerchiefs is to moisten the surface evenly with a spoon and some wheat glue, and then pin the silk, with some toilet pins, around the shelves or on a mattress or feather bed, taking pains to draw out the silk as soon as possible. When dry, the wrinkles will have disappeared. It is a nice job to dress light-coloured silk, and few should try it. Some silk articles should be moistened with weak glue or gum water, and the wrinkles ironed out with a hot flat-iron on the wrong side.

Sitz Bath.—This is a sitting bath, in fact, a hip bath. It is used here made of tin; but in Graefenberg, the sitz bath is a small common flat tub, of about eighteen inches in diameter, containing about two gallons of water. The patient sits in this, with the feet resting on the ground, from eight to forty minutes, or more, according as the case indicates: generally every day; and sometimes twice a day; in severe cases, perhaps thrice a day. It is unquestionably a remedy of great power in all disorders of the abdomen and head. It draws the bad humours from the head, strengthens the whole of the digestive organs, and improves their secretions. Only a small quantity of water is used, with the view of securing a reaction, and thus the water soon becomes warm.

The action of the sitz bath (and also of the foot bath) is derivative, if employed for a short time without changing the water—that is, it draws the blood from the upper regions of the body, by the consecutive reaction of the system, which accelerates the circulation in the smaller vessels of the parts immersed. Thus heat in the head is lessened, congestions there are removed, and the pulse is softened and moderated.

Skeleton Plants.—See *Plants, Skeleton.*

Skirret.—This plant is classed with the water-parsnip, but does not partake of any of the poisonous qualities of that herb; on the contrary, it forms a most nutritious vegetable, and would be more generally cultivated were it not for the large space of ground required to raise a quantity for general use. Skirrets were formerly much esteemed as an esculent, but are now laid aside to make room for roots of less value; for when properly cooked, they are declared by many to be the whitest, sweetest, and pleasantest of roots, besides containing a considerable portion of nourishment. Skirret is a perennial plant, and a native of China. The roots are composed of fleshy, oblong tubers, about the size of the little finger, and joined together in the crown, or head. The roots should be boiled until they are quite tender, when they should be taken up and allowed to drain, and afterwards served with melted butter.

Sleep.—For the renovation and healthful repose of the nervous system and the mind, sleep is as necessary as food and drink are for the muscles, bones, and other parts of the body. Rest alone, unaccompanied by the oblivial state of insensibility called sleep, will not restore the lost vigour occasioned by long-continued waking efforts. At the close of a laborious day the muscles relax and become languid, the eyes grow dim and heavy, the blood flows lazily through the lungs, followed by yawns and nods of the head, if not supported; external objects cease to attract, and the mind becomes feeble, confused, oblivious. We are not sensible of reaching the last stage, though sometimes convulsively recalled, just as we reach it, by the sudden rushing in again of the active mental powers.

Sleep, like the taking of food, should be regular; too little causes languor and exhaustion in time, and too much produces heavy, benumbing influences on both body and mind. The quantity necessary for health is greatest in childhood: in the prime of life, seven or eight hours, even after a day of hard labour, is quite sufficient; though in old age, a little more is required.

Sleep in the day should be avoided.

The most certain promotives of profound, healthy repose are labour, mental peace, a temperate and wholesome supply of food, clothing, and drink, and a properly ventilated sleeping room. If few dreams are desired, and those few pleasant ones, the body should be laid at perfect ease on one side, the limbs not pressing or incommoding each other, the hands open, the stomach not full, and the head moderately elevated. Digestion goes on more slowly during sleep, the heart beats with less vigour, respiration is more deep and slow, and the various secretions are rather less rapid than at other times. Early repose is far more refreshing than if deferred till midnight or later.

Much dreaming indicates imperfect or too-long-continued sleep; though a loaded stomach or a deeply-harassed mind will often produce that or more disagreeable effects.

Sleep, Necessary Rules of.—Dr. Winslow wisely says "There is no fact more clearly established in the physiology of man than this—that the brain expends its energies and itself during the hours of wakefulness, and that those are recuperated during sleep. If the recuperation does not equal the expenditure, the brain withers—this is insanity. Thus it is that, in early English history, persons who were condemned to death by being prevented from sleeping, always died raving maniacs; thus it is that those who are starved to death become insane—the brain is not nourished, and they cannot sleep.

"The practical inferences," says Dr. Spicer, "are these:—1. Those who think most, who do most brain work, require most sleep. 2. That time 'saved' from necessary sleep is infallibly destructive to mind, body, and estate. Give yourself, your children, your servants—give all that are under you the fullest amount of sleep they will take, by compelling them to go to bed at some regular hour, and to rise in the morning the moment they awake; and, within a fortnight, Nature, with almost the regularity of the rising sun, will unloose the bonds of sleep the moment enough repose has been secured for the wants of the system. This is the only safe and sufficient rule; and as to the question how much sleep any one requires, each must be a rule for himself—great Nature will never fail to write it out to the observer, under the regulations just given."

Sleep is a thing that should not be rudely or unnecessarily disturbed. If any ascetic philosopher has made you believe that it is good for you to be hurriedly awakened from your repose at an early hour, and to go out into the raw morning air with your fast unbroken and your body unfortified by the stimulant of food, forget him and his counsel, and take the full measure of your rest. Just as much labour can be accomplished in ten hours as in fourteen, with more efficacy and less fatigue, when proper food and bodily rest are taken.

If Franklin ever originated the maxim, "six hours sleep for a man, seven for a woman, and eight for a fool," it was unworthy of that great man's common sense. On the contrary, if you are a student and engaged in severe mental occupation, just sleep as long as you comfortably can. Lying in bed from laziness is another thing entirely. Nature is recruiting us, steeping our senses in forgetfulness, invigorating our frames for coming duties; therefore nothing should trespass on our honest sleep.

Slides.—See *Magic Lantern*.

Small-Pox.—Upon a subject so serious to the public well-being, we should seek to derive the best guidance from competent authorities, rather than rely upon the caprices of those who pretend, in cases of public excitement, to have discovered some reliable panacea. *The Medical Times* speaks plainly thus:—"The more we have inquired into the progress of the epidemic, the more thoroughly are we convinced that it is in a complete system of vaccination and re-vaccination, that the true preventive lies. Once give small-pox a *locus standi* by even a partial neglect of vaccination, and we must acknowledge our impotence to stamp it out by isolation, disinfection, and other means of direct treatment."

Where, however, the contagion has appeared, means for isolation and disinfection must of necessity be resorted to. These means should be based upon the

established doctrine, that the disease is communicated from the sick to the healthy; and that it does not arise spontaneously from any combination of influences, in the absence of a case from which the contagion may be derived.

The rapid spread of the disease in localities once affected, may be held to arise from a disregard of the precautions plainly indicated. Persons who have been waiting upon the sick, spread the malady by visiting friends and neighbours without changing their apparel; laundresses and needlewomen carry on their occupations in rooms tenanted by sufferers from the disease; and thus they transmit the germs of contagion in the articles conveyed from polluted atmospheres into districts not previously tainted.

The Lancet affords the following valuable instructions upon the purification of infected clothing, bedding, and rooms:—"Disinfection is applicable to the person of the sick, and his ejections and discharges; to the air of his chamber; to his clothing and bedding, and anything used by him; to the clothing of his attendants; to the walls, ceiling, and floor of the apartment; and to everything that the apartment contains. The disinfectants which are most to be relied upon are—a prolonged heat of 230° to 280° Fahr., prolonged boiling in water, sulphurous acid vapour, carbolic acid, and chlorine. Where a patient is being treated at home, the best plan of preventing the diffusion of the contagion is to maintain a constant current of air from without into and through the chamber by means of a small fire, while an old sheet, sprinkled freely with carbolic acid or a solution of chloride of lime, is suspended outside the door. The atmosphere of the chamber, too, may be usefully slightly charged with vapour of carbolic acid or chlorine. The only precaution necessary is to avoid using both these different agents at the same time. On the recovery of a patient, he should not be permitted to mix with other persons until all the crusts have fallen, or until he has taken several baths containing a little carbolic acid in solution.

The best mode of proceeding for disinfection of an infected room we believe to be as follows:—As soon as possible after the sick person is removed, paste up with brown paper all the crevices of the windows and doors, and the whole of the opening of the fire-place, and burn a quarter or half a pound of brimstone in the room, according to its size, by covering that quantity, broken into small pieces, in an iron dish, over a bucket of water, with live coals. The room should be kept closed, and the chinks of the door pasted up, for about six hours. The contents of the room may then be manipulated with comparative safety. The textile articles capable of being boiled without injury should then be removed, and put to soak for some hours in water containing some carbolic acid in solution, and then well boiled for two or three hours. Woollen articles, which cannot be boiled, should be disinfected by heat, in an appropriate oven, which it is the duty of the public local authority to provide. Feather beds and pillows are best disinfected by emptying out the feathers into a clean sheet, and then soaking and boiling the ticks. The feathers may be disinfected by spreading them out upon sheets in a closed chamber, and fumigating, as before, with sulphurous acid, after which they may again be put into the ticks. The room, cleared of these several articles, may then be taken in hand. The paper should be smeared with crude carbolic acid, stripped off, and burned; the ceilings and walls washed with water containing some carbolic acid, and then lime-whited, and the floor and wood-work scrubbed with soap and water and carbolic acid. The various articles of furniture should be similarly cleansed. In poor houses, the only way of effectually dealing with beds and clothing is often absolutely to consume them by fire. After a room has thus been disinfected, it is a good practice to leave it unoccupied, with the windows wide open for a week or a fortnight."

Smiles.—"Nothing on earth can smile but man!" observes Henry Ward Beecher. "Gems may flash reflected light, but what is a diamond-flash compared with a lip-flash? Flowers cannot

smile; this is a charm that even they cannot claim. It is the prerogative of man; it is the colour which love wears, and cheerfulness, and joy—these three. It is the light in the window of the face, by which the heart signifies to father, husband, or friend that it is at home and waiting. A face that cannot smile is like a bud that cannot blossom, and dries up on the stalk. Laughter is day, and sobriety is night, and a smile is the twilight that hovers gently between both, more bewitching than either. But all smiles are not alike. The cheerfulness of vanity is not like the cheerfulness of love; the smile of gratified pride is not like the radiance of goodness and truth. The rains of summer fall alike upon all trees and shrubs; but when the storm passes, and every leaf hangs adrip, each gentle puff of wind brings down the petty shower, and every drop brings with it something of the nature of the leaf or blossom on which it hung: the roadside leaf yields dust, the walnut leaf bitterness; some flowers poison—while the grape blossom, the rose, the sweet brier lend their aroma to the twinkling drops, and send them down perfumed. And so it is with smiles, which every heart perfumes according to its nature: selfishness is acrid, pride bitter, goodwill sweet and fragrant."

Smoky Chimneys.—A correspondent of *The Builder* says: "I have built many chimneys in all possible situations, and have found one simple plan everywhere succeed, the secret being only to construct the throat of the chimney, or that part of it just above the fire-place so small that a man or boy can scarcely pass through. Immediately above this the chimney shaft should be enlarged to double its width, like a purse, to the extent of about three feet in height, and then diminish to its usual proportions. No chimney that I ever constructed thus smoked.

Snapdragon.—Warm the plate before the fire with the plums in it. Also warm an iron spoon between the bars, until very hot. If now you pour the spirit into the spoon, and let it run over upon the fruit, you will find that the spirit, whatever it is, will light rapidly. Apply the flame to the spirit in the hot spoon.

Sneezing.—What *is* a sneeze? It never occurs in health, except excited by some foreign agent irritating the membranes of the nasal passages, upon which the nervous filaments are distributed. In cases of cold, or what is termed influenza, these are unduly excitable, and hence the repeated sneezings which then occur. The nose receives three sets of nerves—the nerves of *smell*, those of *feeling*, and those of *motion*. The former communicate to the brain the odorous properties of substances with which they may come in contact, in a confused or concentrated state; the second communicate the impressions of touch; the third move the muscles of the nose; but the power of these muscles is very limited. When a sneeze occurs, all these faculties are excited in a high degree. A grain of snuff excites the olfactory nerves, which despatch to the brain the intelligence that "Snuff has attacked the nostril!" The brain instantly sends a mandate through the motor nerves to the muscles, saying, "Cast it out!" And the result is unmistakeable. So offensive is the enemy besieging the nostril held to be, that the nose is not left to its own defence. It were too feeble to accomplish this. An allied army of muscles join in the rescue; nearly one-half of the body arouses against the intruder—from the muscles of the lips to those of the abdomen.

Let us consider what occurs in this instantaneous operation. The lungs become fully inflated, the abdominal organs are pressed downward, the ribs rise and extend forward, the lips firmly close, and the veil of the palate drops down to form a barrier to the escape of air through the mouth; and now, all the muscles which have relaxed for the purpose contract simultaneously, and force the compressed air from the lungs, in a torrent, out through the nasal passages, with the benevolent determination to sweep away the particle of snuff which has been causing irritation therein. Such, then, is the complicated action of a sneeze; and if the first effort does not succeed, then follow a second, a third, and a

fourth; the eyes all the while weeping on account of the general strife.

Snowdrop, The.—Not less interesting in botanical and literary detail is our humble snowdrop, which ever links us with the dearest of home-ties, and breathes the breath of new-year's morning, and all the invigorated hopes with which we bound forward for another term of life, and take new resolves to help us through the year.

> "I love snow, and all the forms
> Of the radiant frost.
> I love winds, and waves, and storms—
> Everything almost
> That is Nature's, and may be
> Untainted by man's misery."

What a strange freak of Nature to put together a little blossom of the purest white, and so frail that the merest touch would almost suffice to shiver to atoms, and then leave it to battle with the sleets, and storms, and snow, and fierce hurricanes of winter! Stranger that that little gem should abide the keenest frost, and flourish most, tender as it looks, when the rest of its blooming companions are hushed in the grave of the year's stillness, buried in the sepulchre of vegetable beauty. The wild storms which sweep through the forest, and which, after tearing up the great oaks by the roots, fling them up to the sky as though they were feathers, pass also over the snowy plain, whizz the snow into great drifts, cut the reeds away as if it carried with it a scythe, and yet leave the snowdrop unscathed and still blooming in its virgin beauty where it stood before. There is a moral in the fact. The trees, in their giant proportions, stand stiff against the blast, until it conquers, and wrests them from the soil; the snowdrop bends as the breeze passes, and then lifts up its head unhurt.

The snowdrop belongs to the natural order *amaryllidaceæ*, and is removed but three orders from the crocus. The chief characteristics of the order are large lily-like flowers, divided into six segments, six stamens, the anthers of which are turned towards the pistil, and a long stile crowned with a simple stigma. The ovary, or laboratory, of the seed is beneath the other parts of the flower, and looks like a small green calyx. The leaves are very long, somewhat fleshy, and their edges are not turned towards the stem.

The snowdrop derives its name from its snowy appearance and the circumstance of its growth. Its botanical name (*Galanthus*) is from the Greek, and signifies milk and a flower. The French call it *Perce-neige*, for the same reason. In old times it was called the Fair Maid of February, because it usually appeared most abundantly about the 2nd of February, or Candlemas Day, which day was kept in celebration of that on which the Virgin Mary took the child Jesus to the Jewish temple; and hence the flower was dedicated to the service of the Virgin. Candlemas Eve was the time appointed by our ancestors for extinguishing the Christmas logs, which were allowed to burn from Christmas Day till this time. Herrick, the father of English folk-lore, thus sings of Candlemas Eve:—

> "End now the white loafe and the pye,
> And let all sports with Christmas dye.
>
> * * * *
>
> Kindle the Christmas brand, and then
> Till sunne-sett let it burne,
> Which quencht, then lay it up agen
> Till Christmas next return.
> Part must be kept, wherewith to teend
> The Christmas log next yeare;
> And where 'tis safely kept, the Fiend
> Can do no mischiefe there."

The snowdrop is frequently in bloom from the 5th or 6th of January till late in March. In some districts of England it is very scarce, while in others it is plentiful. A lane near Newport, in the Isle of Wight, is so noted for its abundance of snowdrops as to have obtained the name of Snowdrop Lane. In the language of flowers the snowdrop signifies consolation and adventurous friendship; both of which sentiments are derived from the hardihood with which it bears up against the hardships of its fate, and is still a pure and lovely thing, though surrounded with wintry death and silence. Thus the poet beseeches his Maker:—

> "Make thou my spirit pure and clear
> As are the frosty skies,
> Or this first snowdrop of the year
> That on my bosom lies."

If Lord Bacon stooped from his seat of learning and authority to discourse on the

merits of flowers, surely we, with humbler aims, though we trust with as true a purpose, may endeavour to surround these familiar things of the garden, the field ramble, and the woodland hollow, with the literary and moral significance with which they are so rife; and, in so doing, make that which is too frequently only familiar to the eye, familiar also to the mind of man, and hence a profit and a sweet delight.

"Receive
Thanks, blessings, love for these, thy lavish boons,
And, most of all, their heavenward influences,
O thou that givest us flowers!"

Snuff.—See *Adulterations.*

Soap, Its History and Manufacture.—The earliest mention that we have of soap occurs in the works of well-known Greek and Roman writers. When Rome spread her power over distant lands, she learned the arts of the people she conquered, and thus it became known that the Germans and Gauls made use of a substance in washing which, in their old language, was called *seip.* The Romans named it *sapo,* and our word is *soap.* The writers who mention it describe it as made of goat's fat and ashes mixed together by heat; and there were two kinds, as at present, hard and soft, and also varieties of these kinds, some of which became fashionable at Rome, and were used by the upper classes for dressing their hair as well as washing. Among these sorts, which probably resembled pomatum, there was one known as Batavian froth. We may, therefore, conclude that soap was invented by the people called barbarians about two thousand years ago.

Before that time certain natural productions were used in washing; but with them the cleansing of linen or woollen cloth must have been a work of considerable labour, and less perfect than with manufactured soap. In the earliest times the custom was, as it still is among savage tribes, to stamp on the things to be washed, and tread them under foot in water. Homer alludes to this way of washing. Sometimes, however, a lye was made by pouring water on wood ashes; and this was used to cleanse other things—wine-vessels, and images of the gods in the temples, as well as clothes. Egyptian nitre was also used, dissolved in water; it is believed that this is the same substance as that mentioned in the Hebrew Scriptures under the name of *borith.* From Jeremiah's expression, "Though thou wash thee with nitre, and take thee much soap," we are led to believe that, even in those days, two sorts of materials for washing were known to the Jews. In some countries, too, there were alkaline springs flowing from the ground, and in the water of these clothes could be cleansed without soap. The people still make use of them in different parts of Europe. Ox-gall was also largely employed.

Besides these materials, there are several kinds of meal which have cleansing properties, such as oats, barley, and beans. Bran, too, and rice-water can be used for delicate articles liable to lose their colour, and too weak to bear much rubbing.

There is also reason to believe that the ancients made use of the juice of the *saponaria officinalis,* or soap-wort, a plant found in England and in most European countries. It grows about eighteen inches high, near hedges and thickets, on a round stem, which, as well as the leaves, is very smooth. The flowers are a pale blueish colour, with an oppressive scent, and bloom in August and September. The sap of this plant forms a lather in water; the leaves serve as soap when rubbed, and will remove spots of grease from cloth.

It was at the beginning of the 16th century that soap was first made in England; before that time it had been imported from foreign countries. The process of making was not very different from that which now prevails, and which we will describe.

It is well known that grease or fat will not mix with water unless something else is combined with it. This something else is called an alkali, and by the mixture of fat and alkali soap is produced. There are different kinds of alkalies, two of which are used in soap-making—potash and soda, which is made from common salt. Carbonate of soda contains

carbonic acid; this is removed by mixing it with lime; water is then poured over to form a lye, and this is afterwards carried into the large copper or boiler provided for the purpose at soap manufactories. With the lye a quantity of tallow is put into the boiler, from ten to fifteen hundred-weight of the one, and from 200 to 300 gallons of the other, which, on the average, will give a ton of soap. The whole is boiled together for about four hours, by which time it is generally found that a combination has taken place, and the fat is converted into soap. The fire is withdrawn, and time given to cool; the lye is run off, or pumped out, and fresh lye added, followed by another boiling, and so on, three or four times, a little common salt being thrown in towards the last, to assist the separation of the soap. The fire is then put out, and the melted material left to stand a short time, after which it is carried in ladles or large buckets, and poured into the frames, which may be compared to a sort of wooden well from three to four feet long, fifteen inches wide, and ten or twelve feet high. Some of them will hold several thousand pounds weight. In these the soap remains two or more days, until it is hard and solid, when the wooden frames are lifted off, the mass is cut into slices about three inches thick with wires, and these being cut across, form the bars such as are sold in shops.

The variations in soap, or the different kinds, are chiefly in the materials. To make the best white curd soap, none but the best and purest tallow is used, and sometimes olive oil.

Mottled soap is made of coarser kinds of tallow and kitchen-stuff; and the mottled veins are produced by having very strong lye poured over and stirred into it just before it is taken out of the copper. Different colours may be given in this way.

Yellow soap requires a different mixture; tallow with a considerable quantity of rosin broken small, and a small quantity of palm oil. It makes a better lather than mottled soap. If, however, there is too much rosin and too little tallow, it is bad, irritating to the skin, and especially injurious to woollens which may be washed with it.

The best Windsor soap is made of about nine parts tallow to one of olive oil and soda lye. The scents or perfumes are always added during the melting. Lard is used for some kinds of toilet soaps; they are very white and smooth, and generally preferred for shaving. There are a great variety of soaps of this class with names, colours, and scents to please all the fancies of customers. Some of these are made with olive oil; and others are improved in appearance by being pounded in a mortar after the first process of making, and made up a second time.

Soft soap is made with potash, lye, and oil. Soda is the alkali always used for hard soap; potash for soft soap. In this the lees are not separated after boiling, as with the other; and it is said that the making requires greater care and is more difficult.

There are also medicinal soaps, some combined with mercury or other metals. One is made with olive oil and oxide of lead—the result is diachylon, so much known and used as plaster. Emulsions and liniments are a species of liquefied soap, formed by mixing hartshorn, potash, soda, or lime water, with oil; they present a milky appearance. A mixture of oil and lime water is a good remedy for burns.

Spanish, or Castile soap is made from soda and the best olive oil, mottled by the addition of oxide or sulphate of iron. The purest kind is used for pills; their effect is slightly aperient, and corrective of acidity of the stomach; and, combined with carbonate of soda, they are sometimes prescribed in gout and affections of the bladder. In some forms, too, Castile soap is an antidote to certain kinds of poisons. But when used as a curative, especial pains should be taken to have it pure. The most criminal of all adulterations are those of medicinal substances.

Soft soap, when made of pure materials, potash and olive oil, is also valuable for medicinal purposes. Some kinds of skin disease, scab, and ringworm, may be much better cured by it

than by the greasy ointment so often used. The latter not unfrequently aggravates the disease by creating dirt, while soft soap tends to cleanliness. Sulphur is occasionally mixed with it, o assist its curative effect; but this should only be done under the advice of a medical practitioner. (See *Complexion* and *Hair*.)

Soda Water.—Very few persons know the manner in which this refreshing beverage is made. Soda-water is simply pure water impregnated with carbonic acid gas. It is known by its agreeable pungent taste, by its slightly exhilarating qualities, and its bubbling scintillation. The water to be impregnated with the gas is placed in a strong vessel, usually made of iron or copper, called a fountain. The gas, after being passed through water to purify it, is conducted to the fountain; and after sufficient agitation in contact with the gas, at a high pressure, the water becomes impregnated, and is then what is known as soda-water.

The first experiments were made by Venal, in France, 1750; by Priestley, in 1798. The first manufactory in the world was established at Geneva, by Goss, an apothecary of that city, whose annual sales amounted to 40,000 bottles of "Eau de Selts." In 1790, his partner, M. Paul, founded an establishment in Paris, where were compounded not only the principal mineral waters of France, but even those of foreign countries.

It is a highly refreshing and cooling beverage, acting both upon the skin and the kidneys, and very useful in checking nausea and vomiting. When it contains soda, it is a good anti-acid. Soda-water poured upon milk sweetened with sugar is a very nutritious and pleasant drink which will often remain upon the stomach when other beverages are rejected.

Solid Measure.—See *Cubic Measure.*

Sorrel.—This is found wild in grassy pastures throughout Europe, from the Alps of Lapland to Greece. It is now scarcely known as a pot-herb in this country except at fashionable tables; and the small demand there is for it makes it scarce in the metropolitan markets, where it fetches almost the price of forced plants.

The use of sorrel is of great antiquity, as are its medicinal properties, which, from its nature, are acid and cooling. It is grateful to the stomach, quenches thirst, and is considered to be an excellent antiscorbutic. A handful of the leaves, boiled in a pint of whey, is an excellent spring medicine. It is also an excellent remedy against scurvy, if the leaves are eaten green.

In France there are few soups or sauces made without a portion of sorrel; and, in the Paris vegetable markets, the picking of it is as common as the shelling of peas in our own. In some parts of England it is sometimes boiled as a sauce for roast meat, particularly veal and pork, and it is an excellent substitute for apple sauce, with winter geese. It should, like spinach, be put into a saucepan without water, except the little which remains on the leaves after being washed. It should be boiled slowly, and then be beat up with a small piece of butter, and served at table as spinach. But to form a superior dish, the yolks of eggs, and cream, should be added to the butter.

The Laplanders boil the leaves of sorrel in water, and mix the juice, when cold, with the milk of the reindeer, which they esteem an agreeable and wholesome diet. The Irish are generally fond of acids, and eat the leaves of sorrel with their milk and fish. There are two or three varieties of sorrel in cultivation, but that called French sorrel is by far the best for all culinary purposes.

Soup, Best Method of Preparing.—Professor Liebig thus instructs us:—"When one pound of lean beef, free of fat, and separated from the bones, in the finely-chopped state in which it is used for beef sausages or mince-meat, is uniformly mixed with its own weight of cold water, slowly heated to boiling, and the liquid, after boiling briskly for a minute or two, is strained through a towel from the coagulated albumen and the fibrine, now become hard and horny, we obtain an equal weight of the most aromatic soup, of such strength as cannot be

obtained, even by boiling for hours, from a piece of flesh. When mixed with salt, and the other additions by which soup is usually seasoned, and tinged somewhat darker by means of roasted onions or burnt sugar, it forms the very best soup which can in any way be prepared from one pound of flesh." (See *Giblet Soup*, *Pigeon Soup*, *Vegetable Soup*, and *Joints*.)

Soup, Vegetable.—There are numerous methods of making this soup, the variations depending on the omission or addition of certain vegetables, and in the mode of serving the soup with or without them. The following is as simple and as palatable as any:—Collect whatever vegetables are in season; take equal quantities of turnips, carrots, cabbage, spinach, celery, parsley, onion, a little mint, &c.; add plenty of herbs, cut them fine, put them into the stew-pan, in which has previously been placed some oil; stew gently until the vegetables become tender, then add two quarts of boiling water; stew a quarter of an hour and serve. Some cooks advocate the introduction of green or white peas to the soup; where they are used, they must be boiled until tender in very little water, then mash into a very loose paste; the vegetables, having been scalded, are then added, and two hours will suffice for stewing; season it with salt and pepper. Be careful that it does not burn while cooking.

Sour-Kraut, To Make.—Have ready a vinegar or white-wine cask, with a vent peg four inches from the bottom. Take a number of the best white cabbages, strip off all the outside leaves, and slice the heads transversely, or across, as thin as possible, until you have as much as you require; then lay over the bottom of the cask vine twigs, to the height of the peg. On these put a layer of sliced cabbage three inches deep, strew it plentifully with fine salt, using one pound of salt to fifty of the cabbage; then put another layer of cabbage, and salt and cabbage alternately until the cask is two-thirds full; let the last layer be of salt, put cabbage leaves all over, cover them with a cloth and a piece of wood which will fit the inside of the cask, and place a heavy stone upon it. After four or five days draw out the peg, and let the brine run off, rinse the cloth, wash the board and stone, add more salt over the top, and replace cloth, board, and weight. Repeat these operations at intervals of not more than a month, so that what flows from the cask is clear and free from smell. Keep the cask in a moderate temperature during the whole year. Take it from the cask with a wooden spoon or fork.

To serve Sour-Kraut.—Take out as much sour-kraut as you wish from the cask, and soak it for at least two hours in cold water, then place it in a colander to drain; put it into a large stew-pan or dinner-pot, put on it a piece of corned pork or bacon, and put hot water over nearly to cover it; cover the pot and set it over a moderate fire for an hour or more until the pork is done. Serve with the meat on it. *Or*—Cut the bacon or pork in slices, strew pepper over them; lay the sour-kraut on, put hot water nearly to cover it, cover the pot close and set it over a moderate fire for an hour and a half. *Or*—It may be boiled with water, and fried sausages put over it and served; or the sausages may be boiled with it, and the skins taken off before serving.

Space and Colour.—Ruskin observes:—"It is a favourite dogma among modern writers on colour, that 'warm colours' (reds and yellows) 'approach,' or express nearness, and 'cold colours' (blue and grey), 'retire,' or express distance. So far is this from being the case, that no expression of distance in the world is so great as that of the gold and orange in twilight sky. Colours, as such, are absolutely inexpressive respecting distance. It is their quality (as depth, delicacy, &c.,) which expresses distance, not their tint. A blue band-box set on the same shelf with a yellow one, will not look an inch farther off; but a red or orange cloud in the upper sky will always appear to be beyond a blue cloud close to us, as it is in reality. It is quite true that, in certain objects, blue is a sign of distance; but that is not because blue is a retiring colour, but because the mist in the air is blue, and therefore any warm

colour which has not strength of light enough to pierce the mist is lost or subdued in its blue; but blue is no more on this account a retiring colour than brown is a retiring colour; because when stones are seen through brown water, the deeper they lie the browner they look; or than yellow is a retiring colour, because, when objects are seen through a London fog, the farther off they are the yellower they look. There is, therefore, I think, one law about distance, which has some claims to be considered a constant one; namely, that dullness and heaviness of colour are, more or less, indicative of nearness. All distant colour is *pure* colour; it may not be bright, but it is clear and lovely, not opaque, nor soiled; for the air and light coming between us and any earth or imperfect colour, purify or harmonize it; hence, a bad colourist is peculiarly incapable of expressing distance."

Spectacles, Hints on the Use of.—From a valuable book, "Practical Remarks on Impaired Vision," by Mr. Cooper, we extract the following:—"It cannot be too strongly urged upon any one about to use spectacles for the first time, that that power which will enable him to read without much exertion by candle-light is the only power suitable for him. It is by candle-light only that he should use glasses at first, and as soon as he finds that he stands in need of glasses by day as well as by candle-light, and that the glasses he uses no longer afford him sufficient assistance by candle-light, it will be proper to use the next power for the evening, but for the evening only, and to allow himself the use of the others—and their use only—during the day.

"The greatest caution as to increasing the power of glasses should be observed, for persons who change their glasses, unnecessarily increasing their power each time, are exhausting the resources of art, instead of economising them as much as possible. Optical aid can only be extended to a certain point, and the steps to that point should be as slow and as numerous as possible. By exercising prudent precautions, persons may often attain great age, and yet never require the aid of glasses beyond a very moderate power; others, on the contrary, who from ignorance frequently increase the power of their glasses, may run through the whole assortment, and leave themselves only the most inconvenient resources to fall back upon—viz., the very highest powers."

Common, cheap spectacles sometimes appear to answer as well as those which cost three or four times the money; but cheap glasses are not to be depended upon—they are sometimes ground irregularly and imperfectly, and then they injure the eyes. It is better, therefore, to have spectacles from a respectable optician, who has a character to maintain. Spectacles having lenses called *pebbles*, which is rock crystal, are not liable to be scratched like glass; but they are not in any degree better than those of glass for the eyesight; and if care be taken of the latter they do just as well.

There are three kinds of spectacle-glasses, the *convex*, the *concave*, and the *periscopic*. The first are to correct short sight, the second to counteract long sight, while the periscopic are for either. This last description of lens is both concave and convex, the former on the side nearest the eye, the latter on the side furthest from it. For long sight, as well as short, the convexity and concavity are so made to differ as to furnish any required focus. Mr. Cox, a very clever optician, represents that in glasses of this form the aberration of light is greater than in any other lenses, and that periscopic glasses are liable to be scratched. They have, however, one very great advantage, which is this:—With common glasses, especially concave, the wearer can see only through the exact middle of the lens; he must, therefore, turn his head whenever he directs his view to any lateral object. With periscopic glasses he may see through any part of them, and can observe objects by his side without turning his head. If, however, periscopic glasses be defectively made, they are injurious to the eyes. They should be gauged and examined before they are purchased, to be assured of their accuracy.

Spectral Illusions.—The images of objects seem to be reproduced

before the eye of the mind by a voluntary effort, in every exercise of recollection; and what is very surprising, the images thus reproduced by the will, will sometimes continue to intrude themselves even on the bodily sense, when the mind would fain dismiss them, so as to assume that real appearance of the object thought of which induces weak-minded persons to think that they have seen supernatural apparitions. Thus a gentleman, mentioned by Dr. Hibbert, having been told of the sudden death of a friend, saw him distinctly when he walked out in the evening. The power of the mind to embody whatever it strongly conceives, is strikingly demonstrated in those cases in which a number of persons have imagined themselves to have seen the same apparition. Thus, a whole ship's crew were thrown into consternation by the ghost of the cook, who had died a few days before. He was distinctly seen by them all, walking on the water with a peculiar gait by which he was distinguished, one of his legs being shorter than the other. The cook, so plainly recognized, was only a piece of old wreck.

Speech, PROPRIETY OF.—1. All should be quite as anxious to *talk* with propriety as they are to think, work, sing, paint, or write according to the most correct rules.

2. Always select words calculated to convey an exact impression of your meaning.

3. Let your articulation be easy, clear, correct in accent, and suited in tone and emphasis to your discourse.

4. Avoid a muttering, mouthing, stuttering, droning, guttural, nasal, or lisping pronunciation.

5. Let your speech be neither too loud nor too low, but adjusted to the ear of your companion. Try to prevent the necessity of any persons crying "What?" "What?"

6. Avoid a loquacious propensity; you should never occupy more than your share of conversation, or more than is agreeable to others.

7. Beware of such vulgar interpolations as "You know," "You see," "I'll tell you what."

8. Learn when to use and when to omit the aspirate *h*. This is an indispensable mark of a good education.

9. Pay a strict regard to the rules of grammar, even in private conversation. If you do not understand these rules, learn them, whatever be your age or station.

10. Though you should always speak pleasantly, do not mix your conversation with loud bursts of laughter.

11. Never indulge in uncommon words, or in Latin or French phrases, but choose the best understood terms to express your meaning.

12. Above all, let your conversation be intellectual, graceful, chaste, discreet, edifying, and profitable. (See *Conversation.*)

Spinach.—This plant is a hardy annual, and was first cultivated in the English garden about the year 1568. Eaten freely, spinach is laxative and cooling; it has no hurtful quality, but does not afford much nutriment. It is, however, a useful and grateful vegetable, and very wholesome, and may be eaten in almost all kinds of diseases, when no other vegetable would be allowed.

The leaves of these plants being of a very succulent or moist nature, must be boiled without water, except what adheres to them in the rinsing, after having been washed. Spinach may be grown in any common garden soil; but the more it has been previously enriched with dung the better; for winter spinach especially, it is hardly possible to manure the ground too highly. The seeds generally come up in a fortnight after sowing very early in the spring. When the plants have leaves two or three inches broad, they will be fit for gathering. This is done in two ways, either by cutting them up with a knife wholly to the bottom, or drawing and cleaning them out by the root. Either method can be adopted, according to the season and other circumstances. For an early summer crop the seed should be sown in rills, not too thick, in the beginning of February.

Spinach.—IN THE FRENCH WAY, TO DRESS.—Pick the spinach leaf by leaf from the stems, and wash it in spring water, changing it several

times; then shake it in a dry cloth. Throw it into sufficient well-salted boiling water to allow it to float freely, and keep it pressed down with a skimmer, that it may be equally done. When quite young, it will be tender in ten minutes. Drain it thoroughly, and when it is cool, form it into balls, and press the moisture from it. Next, chop it fine upon a trencher; put two ounces (for a large dish) of butter into a saucepan, lay the spinach upon it, and keep it stirred over a gentle fire until dry; dredge in a spoonful of flour, and turn the spinach as it is added; pour to it gradually a few spoonfuls of veal gravy. Stew the whole briskly until the gravy is absorbed.

Sponges.—Fifty-six species of sponge are found on the British coasts alone. These problematical creatures stand on the border line between the animal and vegetable kingdoms, and are attached to both, in turn, by naturalists. As, however, they want both sensation and motion, we have good reason for classing the sponges among the marine plants. The common sea, or bathing sponge, which plays so useful a part in our households, is usually obtained from one of the islands of the Archipelago, where it is attached to reefs, and forms a considerable article of trade. Burnt sponge is still employed as an effectual remedy in cases of goitre, and owes its medicinal power to the iodine, bromine, and carbonate of lime which are found in the ashes.

The body of the sponge consists of numerous horny fibres, constantly intersecting each other, in which very many pointed pieces of lime are imbedded, and is traversed by a system of water-conducting canals, which commence with small pores at the surface, and pour their contents into the larger vessels. These, too, are finally discharged through larger openings. According to the observations of Dr. Grant, the water flows in through the smaller pores, and out again through the larger canals, so long as the sponge remains alive. These constant currents supply it with the necessary nourishment, and maintain the change of substance, which these low creatures require as much as the highest beings. All the horny parts are covered with a semi-fluid viscous substance, in which the simple life of the sponge has its residence. It is this which secretes the firm parts, forms the the real spongeous skeleton, and makes the mass larger.

Sponges are propagated in a strange way. At certain seasons the walls of the canals are covered with countless small dots, or bodies, which are the spores, or young eggs, of the sponge. As they become larger, they grow covered with cilia, and soon quit the maternal body, to flow out into the open sea. Here they swim about freely for a time, by means of the constant motion of their cilia, till they attach themselves to some fixed object, in which they can await their further development. From this moment their wanderings cease, and a quiet vegetative life is substituted for the adventurous nomadising. From this history of their development it might seem as if the sponges could not be denied an animal nature, but the spores of the seaweed enjoy the same privilege of a movable life, so that this is no distinguishing mark between the animal and vegetable kingdoms.

To Preserve Sponges.—The following is an excellent means of preserving sponges in proper condition:—A sponge should never be wrung, as this breaks the fibres, and injures its elasticity; squeeze it as dry as possible, and hang it by a string to dry in the air. Leaving it soapy soon spoils a sponge. When used with soap, it should be squeezed well in warm water, and left to lie a few minutes in cold.

Sprats, as Anchovies.—Take a gallon of fine fresh sprats, pick out the small ones and refuse, and, without either washing or wiping, put them in a wide-mouthed jar—having previously taken the heads off and drawn the gut—and scatter between each layer the following mixture:—Common coarse salt, one pound; saltpetre, two ounces; bay-salt, one pound; salt prunella, two ounces—all beaten fine; cochineal, powdered fine, two ounces. Let them be pounded separately, and mixed with great care, and thoroughly.

Square or Surface Measure.—

	Inches.	Feet.	Yards.	Poles	Chains.	Rods.
Square foot..	144	1	..	..	..	..
Square yard	1,296	9	1	..	..	..
Rod, pole, or perch	39,204	272¼	30¼	1	..	..
Square chain	627 624	4,356	484	16	1	.
Rod	1,568,160	10,890	121	40	2½	1
Acre	6,272,540	43,560	4,840	160	10	4

A square mile contains 640 acres, 2,560 roods, 6,400 chains, 102,400 rods, poles, or perches, or 3,097,000 square yards.

"Squaring of Words,"

GAME OF.—A new drawing-roomg game is quite an acquisition. Doubtless those are the best which stimulate the imagination and tax the knowledge of the players. Without submitting the members of a merry party to the tortures of a competitive examination, some of these drawing-room games are better and more real tests of the acquirements of an individual than a hundred deliberate examinations. They require no special effort, they do not admit of cramming; cribs are quite useless, as well as inadmissible; all is spontaneous, fair, and above-board. For a combination of all these excellent qualities we recommend, as an agreeable addition to drawing-room games, that of "squaring words." The apparatus of this game consists of a few scraps of writing paper and a pencil for each player.

RULES OF THE GAME.

1. The game should be played with words of three, four, five, or six letters; more than six will be too difficult.

2. The words should be chosen either by a person who remains independent of the game, or at random from a vocabulary.

3. The game may be played either for a small pool, to which each player contributes, or for forfeits. If for a pool, a prize may be awarded to the player who first squares the word, and another to the second.

The operation of squaring a word may be best shown by example. It may, however, be described as follows:—Having written down the word horizontally and perpendicularly, you must find other letters to complete the square, which will also read in words both horizontally and perpendicularly.

WORDS OF THREE LETTERS.

Examples—To square the words *Cat*, *Dog*, *Tea*, *Pig*, *Rap*:—

C A T D O G P I G R A P
A P E O N E I C E A L E
T E A G E T G E T P E T

WORDS OF FOUR LETTERS are more difficult.

Examples.—To square *Love*, *Milk*, *Lamp*, *Town*:—

L O V E M I L K L A M P T O W N
O B E Y I D E A A R E A O B O E
V E T O L E A N M E A T W O N T
E Y O T K A N T P A T E N E T S

WORDS OF FIVE LETTERS are more difficult still. *Chair* may be squared with the help of *Haddo*, *Adieu*, *Ideas*, and *Rouse*.

With SIX LETTERS the difficulty increases progressively. Here, however, we may achieve the apparent impossibility of

Squaring the Circle.

C I R C L E
I C A R U S
R A R E S T
C R E A T E
L U S T R E
E S T E E M

Various exercises may be suggested out of the words thus obtained—thus, each of the party may be required to invent some composition, either in poetry or prose, containing all the words in the order of their occurrence. Or they may be requested to point out some sequence or connection between the words, as, for example:—

The six words required to "square the circle" may suggest the following cognate reflections:—

1. We have the *circle* to square, which is regarded as a mathematical impossibility.

2. A man who attempted an impossibility, and failed miserably.

3. That which the accomplishment of an impossibility would be.

4. That which only the Omnipotent can accomplish.

5. The physical expression of glory.

6. The mental expression of the same.

Sometimes, in squaring six letters, we may have recourse to two, or even more words, as in the word *Domino*:—

D O M I N O
O N E D A Y
M E R I T S
I D I D I T
N A T I V E
O Y S T E R

Here we have *one day* and *I did it* for lines. The sequence of *native* and *oyster* is curious enough, though very curious accidents of this kind are not common in the game of *Squaring Words*.

Stamp Duties.—

BILLS INLAND, OR PROMISSORY NOTES.

	£	£	s.	d.
Not exceeding	5	0	0	1
Exc. £5, not exc.	10	0	0	2
„ 10 „	25	0	0	3
„ 25 „	50	0	0	6
„ 50 „	75	0	0	9
„ 75 „	100	0	1	0
„ 100 „	200	0	2	0
„ 200 „	300	0	3	0
„ 300 „	400	0	4	0
„ 400 „	500	0	5	0
„ 500 „	750	0	7	6
„ 750 „	1000	0	10	0
„ 1000 „	1500	0	15	0
„ 1500 „	2000	1	0	0
„ 2000 „	3000	1	10	0
„ 3000 „	4000	2	0	0
„ 4000 per	1000	0	10	0

BONDS AND MORTGAGES.

	£	£	s.	d.
Not exceeding	50	0	1	3
Exc. £50, not exc.	100	0	2	6
„ 100 „	150	0	3	9
„ 150 „	200	0	5	0
„ 200 „	250	0	6	3
„ 250 „	300	0	7	6
„ 300 „	400	0	10	0
„ 400 „	500	0	12	6
„ 500 „	600	0	15	0
„ 600 „	700	0	17	6
„ 700 „	800	1	0	0
„ 800 „	900	1	2	6
„ 900 „	1000	1	5	0
For every additional £100 or fractional part		0	2	6

LIFE AND FIRE INSURANCES.

	£	s.	d.
Policy of Insurance made upon any life where the sum insured shall not exceed £25	0	0	3
Above £25 and not above £500; then for every £50, and any fractional part of £50	0	0	6

LICENCES.

	£	s.	d.
Marriage, in England, special	5	0	0
Ditto, not special	0	10	0
Non-residence of any clergyman	1	0	0
Appraiser	0	10	0
Banker	30	0	0
Pawnbroker, London	15	0	0
Elsewhere	7	10	0

APPRAISEMENTS.

			£	s.	d.
Sum not exceeding £50			0	2	6
Exc. £50	„	100	0	5	0
100	„	200	0	10	0
200	„	400	0	15	0
500			1	0	0

The days for the allowance of spoiled stamps, at Somerset House, are Tuesdays, Thursdays, and Saturdays, between the hours of twelve and two.

Stereoscope, The.—For the discovery of this interesting instrument we are indebted to Professor Wheatstone. The professor's first stereoscope was composed of two small mirrors placed at an angle of 90°, and each reflecting to one eye one of the two binocular images. He afterwards constructed a refracting telescope, composed of two prisms of about 8° each, placed between the eye and one picture, and refracting the two images on one intermediate space, where they coalesced.

Sir David Brewster constructed a stereoscope somewhat similar, but, instead of two common prisms, supplied with two semi-lenses, acting at the same time as refracting prisms and as magnifying glasses, by which the pictures could be considerably enlarged. This instrument was so constructed that all direct reflection was avoided, which is an indispensable arrangement for the inspection of daguerrotype surfaces; and this contrivance, and the convenient shape of the instrument, has been partly the cause of its great popularity and usefulness. This instrument was called by Sir David Brewster the lenticular stereoscope. Photography alone can produce two images perfectly identical to the two images on the two retinæ; and if we can place them so that the right perspective is seen only by the right eye, and the left perspective only by the left

eye, both in the line of direct vision, we have on each retina the same representation we had from looking at the natural objects. This is precisely the effect of the stereoscope; therefore, in the stereoscope we have the same sensation of solidity and distance as we have with two eyes. When we look at a solid object, such as a cube or a statue, it is obvious that the right eye sees some parts of the solid which the left eye cannot see, and *vice versâ*. In looking with two eyes, the objects appear solid and separated from each other, because we are unconsciously taught to judge that what is seen by one eye, and not by the other, must be on a receding part of the solid, and hence the idea of solidity in our mind.

When we direct our vision from an object upon an object nearer or more distant, we are obliged to shift the two retinæ in order to cause their axis to correspond with the new angle of vision, and to obtain a single vision. This is done with wonderful rapidity, and we are unconscious of the exertion.

Stewing and Boiling.—The failure of these processes in cookery generally arises through under, or too quickly cooking; in baking and roasting it is more frequently over-cooking, which makes meat hard and dry, and, where there is much butter or grease used (as in pastry), causes it to be especially unwholesome by rendering the oily matter acrid and highly irritating to the stomach. Such is the case with baked pastry, which is difficult of digestion when made with much butter or grease of any kind. Moreover, the addition of much greasy substance in cookery, independent of its tendency to become acrid, either out of, or in the stomach, is injurious, by preventing the penetration of the substance to which it is added by the digestive juices; and the closer the texture of the substance, the more does the objection apply. Nothing, perhaps, is more trying to the stomach than a heavy pudding soaked with grease.

If fat and oil is to be easily digested, it must be incorporated with other substances; but if it be added to food in cooking, either in the shape of melted butter or the like, in such quantity that it floats on the stomach, then most certainly it becomes irritating, causing heart-burn and other uneasy sensations. Some persons there are, doubtless, who may disregard these matters, and who will laugh at the cautions; but the great frequency of stomach complaints may well suggest the question, whether somewhat is not due to bad and unwholesome methods of preparing our daily food, and at the same time, whether perseverance in such methods is not bad economy in every sense.

In cooking fish there is a different rule to that which applies to the meat cookery. As the water in which fish has been boiled is almost invariably thrown away, and as generally there is no grease to be wasted in the fire, cooking by boiling is perhaps the method which best preserves the nutritious properties most certainly.

We assert that people who generally cook their food in water, do it more economically, and derive from it a greater amount of wholesome nourishment, than those who employ the direct action of heat, as in roasting, broiling, &c. Moreover, the stewing processes afford greater facility for using up different kinds of easily attainable vegetable productions, and on this account alone, are preferable.

Stinging Nettles.—The common or large nettle is known by grievous experience to every one, though perhaps you have never yet inquired whence the pain arises from touching it. The sting is not like a pin or needle, solid throughout, but is hollow at the centre and perforated at the point, and, when touched, it is not only sharp enough to pierce the skin, but also is so constructed as to inject a particle of poisonous fluid into the wound it makes, and this is the source of the pain which follows. The wound itself is so minute that it could scarcely be felt, but the poison irritates, inflames, and causes the well-known pain alluded to. The plant, the small species of which stings the most severely, is covered all over with hairs; but, by using a microscope, or magnifying glass, you may perceive that these are not all of one kind, some being perforated, which are the stings, while others are

not. Each sting stands upon a pedestal, and the pedestal performs the office both of gland and poison-bag. It is cellular, and spongy within; the sting is placed on the top, and may be moved by a slight pressure to either side, or round in a circle; it seems to stand, as it were, on a universal joint. When a body touches its point, the base is pressed down into the spongy pedestal, and the poisonous fluid rushes up through the tube of the sting, and flows out at its point.

"Stirabout."—See *Oatmeal.*

Stockings, Silk, To Clean.—Wash your stockings first in white soap liquor, lukewarm, to take out the rough dirt; then rinse them in water, and work them well in a fresh soap liquor. Then make a third soap liquor, pretty strong, in which put a little stone blue, wrapped in a flannel bag, till your liquor is blue enough; then wash your stockings well therein, and take them out and wring them. Then let them be dried so that they may remain a little moist; then stove them with brimstone; after which, put upon the wood leg two stockings, one upon the other, observing that the two fronts, or outsides, are face to face; then polish them with a glass. The two first soap liquors must be only lukewarm, the third soap liquor as hot as you can bear your hand in it. Blonds, and gauzes are whitened in the same manner, only a little gum is put in the soap liquor before they are stoved. (See *Hosiery.*)

Stocking-Stitch.—See *Patching.*

Stones, Emblematic.—In Poland, according to a superstitious belief, each month of the year is under the influence of some precious stone, which influence is attached to the destiny of persons born during the course of the month. It is, in consequence, customary amongst friends, and more particularly between lovers, to make, on birthdays, reciprocal presents, consisting of some jewel ornamented with the tutelar stone. It is generally believed that this prediction of happiness, or rather, of the future destiny, will be realised according to the wishes expressed on the occasion:—

January.—The stone of January is the jacinth or garnet, which denotes constancy and fidelity in any sort of engagement.

February.—The amethyst, a preservative against violent passions, and an assurance of sincerity and peace of mind.

March.—The bloodstone is the stone of courage and wisdom in perilous undertakings, and firmness in affection.

April.—The sapphire or diamond is the stone of repentance, innocence, and kindliness of disposition.

May.—The emerald. This stone signifies happiness in love, and domestic felicity.

June.—The agate is the stone of long life, health, and prosperity.

July.—The ruby or cornelian denotes forgetfulness of, and exemption from, the vexations caused by friendship and love.

August.—The sardonyx. This stone denotes conjugal felicity.

September.—The chrysolite is the stone which preserves, and cures madness and despair.

October.—The opal or aqua-marina signifies distress and hope.

November.—The topaz signifies fidelity and friendship.

December.—The turquoise is the stone which expresses great sureness and prosperity in love, and in all the circumstances of life.

Storm-Glass, To Construct.—Take of camphor 2½ drachms; muriate of ammonia, 38 grains; water, 9 drachms; rectified spirit, 11 drachms. Dissolve with heat. At the ordinary temperature, plumose crystals are formed. On the appearance or approach of stormy weather, these crystals are observed to occupy only the bottom of the tube, where they appear to be compressed into a compact mass; while, on the other hand, during fine weather, they assume their plumose character, and extend a considerable way up the glass. The solution should be put in a long glass tube or bottle, over the mouth of which a piece of bladder is to be tied, which should be perforated with a fine needle, in order to admit the air. A long eau-de-cologne bottle answers capitally. This simple construction of a phial barometer,

or what is commonly termed a storm-glass, will be found very useful.

Strawberries, To Preserve.—For bottling or preserving strawberries, except for jam, they should be ripe, but not in the least soft. Make a syrup of a pound of sugar for each pound of fruit. The sugar should be double refined, although refined sugar does very well; the only difference is in the colour of the preserve, which is not so brilliant as when done with other than crushed or loaf sugar. To each pound of sugar put a teacupful of water; set it over a gentle fire, and stir it until it is all dissolved; when boiling hot put in the fruit, having picked out every imperfect berry; let them boil very gently in a covered kettle until, by cutting one open, you find it cooked through. That will be known by its having the same colour throughout. Take them from the syrup with a skimmer, and spread them on flat dishes, and let them remain till cold; boil the syrup until quite thick; then let it cool and settle; put the fruit into jars or pots, and strain or pour the syrup carefully over, leaving the sediment, which will be at the bottom of the pitcher. The next day, cover with several papers, wet with sugar boiled to candy; set them in a cool, airy place.

Strawberries keep perfectly well made with seven pounds of sugar to ten of fruit; they should be done as directed above, and the syrup cooked quite thick. A pint of red currant juice, and a pound of sugar for it, to three pounds of strawberries, make the syrup very beautiful.

Strawberries, To Protect, from Birds.—A correspondent of *Land and Water* writes:—"It often appears to me that people for the most part are not aware of the great use cats are to us. Of course, we know of their use with respect to mice and rats, but do we generally know of the great help they can give us in protecting from birds our garden fruit and flowers? The late heavy rains this spring have given us the promise of abundance of strawberries, and in the south, at least, the bloom is magnificent. To keep off the birds how simple, how certain, how small is the cost of a cat on a small chain sliding on a wire, and giving the animal the walk up and down the whole length of the strawberry beds. A knot at each end of the wire readily prevents the cat from twisting round the post which supports the wire, and a small kennel placed in the middle of the walk affords her shelter, and a home for her kittens. In large gardens a second cat is required, and the young ones in their frequent visits to each other greatly assist in scaring away birds. I have for more than thirty years used, and seen used with perfect success, this easy method of protecting fruit, and the very same plan is equally good in keeping hares and rabbits off flower beds. After the first few days, cats in no way dislike this partial restraint, and when set quite free, after a few weeks' watching, they will of their own accord continue on guard. The kittens, more especially, attach themselves to this garden occupation, and of their own accord become the gardener's best allies."

Strength, Muscular.—The muscular power of the human body is wonderful. A Turkish porter will trot at a rapid pace and carry a weight of six hundred pounds. Milo, a celebrated athletic Cretonian, in Italy, accustomed himself to carry the greatest burthens, and, by degrees, became a monster in strength. It is said, that he carried an ox on his shoulder, four years old, and weighing upwards of a thousand pounds, for above forty yards, and afterwards killed it with one blow of his fist. He was seven times crowned at the Pythian games, and six at the Olympic. He presented himself the seventh time, but no one had the courage to enter the lists against him. He was one of the disciples of Pythagoras, and to his uncommon strength the learned preceptor and his pupils owed their lives. The pillar which supported the roof of the school suddenly gave way, but Milo supported the whole weight of the building and gave the philosopher time to escape. In his old age, Milo attempted to pull up a tree by the roots, and break it. He partially effected it; but his strength being gradually exhausted, the severed parts came together again, and held him fast by the hand. He was thus con-

quered, and being unable to disengage himself, died in that position.

Haller mentions that he "saw a man whose finger being caught in a chain at the bottom of a mine, by keeping it forcibly bent, supported by that means the weight of his whole body—one hundred and fifty pounds—until he was drawn up to the surface, a distance of six hundred feet.

Augustus XI, King of Poland, could roll up in his hand a silver plate like a sheet of paper, and break the strongest horse-shoe asunder.

A lion is said to have left the impression of his teeth on a piece of solid iron.

Substances in the Eye.—Place your fore-finger upon the cheek-bone, having the patient before you; then draw the lid upward, downward, or aside, and you will probably be able to remove the substance. But if this does not answer, use a knitting-needle, or bodkin. Turn the eyelid outwardly over the needle, and you will then probably see the substance, which may be removed by the point of a finger moistened with a little saliva. A person may frequently remove substances from his own eye, by catching hold of the eye-lashes, and drawing one lid over the other. As soon as the substance is removed, bathe the eye in cold water, and if pain or inflammation be felt, exclude the light for a time. When *lime* is in the eye, it should be syringed well with warm water and vinegar, in the propoition of one table-spoonful of vinegar to eight or ten of water.

Sugar, Consumption of.—The sugar crop of the world is reported to amount to 2,800,000 tons per annum. Of this amount, the United States consume 530,000 tons, and Great Britain, 680,000. The consumption of sugar in this country is increasing annually, having been raised to the extent of 67,000 tons in 1871 above 1870. Of the total production, Cuba has heretofore produced one third, and the Southern States of America produced 100,000 tons in 1871.—(See *Adulterations*).

Sun, The.—The sun is not simply, as was supposed of old, a globe of incandescent matter. The light we receive from him comes, indeed, from an incandescent source, but it has been subjected before reaching us to a very singular and characteristic process—a process, the traces and peculiarities of which there is no mistaking. From the incandescent matter which supplies the solar light, there stream forth light waves of every possible length between certain limits, namely, between the length belonging to the extreme red end of the solar spectrum and that belonging to the extreme violet end. But when the light reaches us certain wave-lengths are found to be wanting. The case corresponds to that of a harp in which certain strings are missing here and there. Or, rather, if a harp were constructed with an indefinite number of strings, increasing gradually in length between the usual limits, so that in striking the finger across them a sound would be produced, changing by indefinite gradations from the gravest note audible to human ears to the most acute, then if strings were removed here and there—and sometimes several close together—to the number of several thousands, the sound produced when the finger was drawn across the strings would differ from that before produced precisely as the light received from the sun differs from that which is actually poured forth by the incandescent central mass.

Sunflowers, The Value of.—These gaudy flowers of the cottager's garden are easily cultivated, and their value is scarcely known. The seed forms a most excellent and convenient food for poultry, and it is only necessary to cut off the heads of the plant when ripe, tie them in bunches, and hang them up in a dry situation, to be used as wanted. They not only fatten every kind of poultry, but greatly increase the quantity of eggs they lay. When cultivated to a considerable extent, they are also capital food for sheep and pigs, and for pheasants. The leaves, when dried, form a good powder for cattle; the dry stalks burn well, and form an abundance of alkali; and when in bloom, the flower is most attractive to bees.

Superscriptions.—See *Archbishop*, *Bishop*, *Baronet*, *Duke*, *Earl*, *Marquis*, *King*, *Prince*, and *Queen*.

Surnames, Scottish.—The clanship of Scotland has tended to limit the number of surnames in that country. A hundred and fifty surnames represent nearly half the entire three millions of population. First in number in Scotland, as in England, stands the cosmopolitan Smith; but Jones, the name which occupies the second place in England, is "nowhere" in Scotland M'Donald is second in Scotland, and then follow Brown, Thompson, Robertson, Stewart, Campbell, Wilson, Anderson. Dr. Stark, of the registry office, has ascertained that the registers of births in 1865 show these to be the strongest nine surnames in Scotland, and the same result was obtained on a former occasion. Scott is the tenth name upon the birth register, followed by Miller, McKenzie, Reid, Ross, M'Kay, Johnston, Murray, Clark, Paterson, Young—the spelling sometines varying a little in different families. In more recent registers, Fraser and Maclean had place among the first twenty, and Clark and Young were a little lower on the roll. In proportion to population there are much fewer surnames in Scotland than in England; the total number is about 6,800. The most usual Christian names in Scotland are John and James for males; Margaret and Mary for females.

Syrup, D'Orgeat.—This elegant syrup is prepared as follows:—Take twenty ounces of sweet and eight ounces of bitter almonds; nine pounds of white sugar, and four pints of water. Blanch the almonds, dry them well, and beat them with a portion of the sugar, and gradually add two-thirds of the water; strain through linen, wash the almonds on the strainer with the rest of the water, and dissolve the sugar in the strained liquor by a gentle heat. Pour the syrup into an earthen vessel, remove the scum, and when nearly cold add two ounces of orange flower-water.

Swimming, Hints on.—Dr. Franklin observes:—"The only obstacle to improvement in this necessary and life-preserving art is fear; and it is only by overcoming this timidity, that you can expect to become a perfect master of swimming. It is a very common thing for novices in the art of swimming to make use of corks or bladders to assist in keeping the body above water; some have utterly condemned the use of these; however, they may be of service for supporting the body while one is learning what is called the stroke, or that manner of drawing in and striking out the hands and feet that is necessary to produce progressive motion. But you will be no swimmer till you can place confidence in the power of the water to support you; I would therefore advise the acquiring that confidence in the first place; especially as I have known several who, by a little practice necessary for that purpose, have insensibly acquired the stroke, taught as if it were by Nature. The practice I mean is this: choosing a place where the water deepens gradually, walk coolly into it till it is up to your breast, then turn round your face to the shore, and throw an egg into the water between you and the shore; it will sink to the bottom, and be easily seen there if the water be clean. It must lie in the water so deep that you cannot reach to take it up but by diving for it. To encourage yourself in order to do this, reflect that your progress will be from deep to shallow water, and that at any time you may, by bringing your legs under you, and standing on the bottom, raise your head far above the water; then plunge under it with your eyes open, which must be kept open before going under, as you cannot open the eyelids for the weight of water above you, throwing yourself towards the egg, and endeavouring, by the action of your hands and feet against the water, to get forward till within reach of it. In this attempt you will find that the water buoys you up against your inclination; that it is not so easy to sink as you may imagine, and that you cannot but by active force get down to the egg. Thus you feel the power of water to support you, and learn to confide in that power, while your endeavours to overcome it and reach the egg, teach you the manner of acting on the water with your feet and hands, which action is afterwards used in swimming, to support your head higher above the water, or to go forward through it.

"I would the more earnestly press you to the trial of this method, because, though I think I shall satisfy you that your body is lighter than water, and that you might float in it a long time with your mouth free for breathing, if you would put yourself into a proper posture, and would be still, and forbear struggling; yet, till you have obtained this experimental confidence in the water, I cannot depend upon your having the necessary presence of mind to recollect the posture, and the directions I gave you relating to it. The surprise may put all out of your mind.

"Though the legs, arms, and head of a human body, being solid parts, are specifically somewhat heavier than fresh water, yet the trunk, particularly the upper part, from its hollowness, is so much lighter than water, as that the whole of the body, taken altogether, is too light to sink wholly under water, but some part will remain above, until the lungs become filled with water, which happens from drawing water to them instead of air when a person in the fright attempts breathing while the mouth and nostrils are under water.

"The legs and arms are specifically lighter than salt water, and will be supported by it, so that a human body cannot sink in salt water, though the lungs were filled as above, but from the greater specific gravity of the head. Therefore, a person throwing himself on his back in salt water, and extending his arms, may easily lie so as to keep his mouth and nostrils free for breathing; and, by a small motion of his hand, may prevent turning, if he should perceive any tendency to it.

"In fresh water, if a man throw himself on his back, near the surface, he cannot long continue in that situation but by proper action of his hands on the water; if he use no such action, the legs and lower part of the body will gradually sink till he come into an upright position, in which he will continue suspended, the hollow of his breast keeping the head uppermost.

"But if, in this erect position, the head is kept upright above the shoulders, as when we stand on the ground, the immersion will, by the weight of that part of the head that is out of the water, reach above the mouth and nostrils, perhaps a little above the eyes, so that a man cannot long remain suspended in water with his head in that position.

"The body continuing suspended as before, and upright, if the head be leaned quite back, so that the face looks upwards, all the back part of the head being under water, and its weight, consequently, in a great measure supported by it, the face will remain above water, quite free for breathing, will rise an inch higher every inspiration, and sink as much every expiration, but never so low as that the water may come over the mouth.

"If, therefore, a person unacquainted with swimming, and falling accidentally into the water, could have presence of mind sufficient to avoid struggling and plunging, and to let the body take this natural position, he might continue long safe from drowning, till perhaps help should come; for as to the clothes, their additional weight when immersed is very inconsiderable, the water supporting it; though, when he comes out of the water, he would find them very heavy indeed.

"I know by experience that it is a great comfort to a swimmer who has a considerable distance to go, to turn himself sometimes on his back, and to vary in other respects the means of procuring a progressive motion.

"When he is seized with the cramp in the leg, the method of driving it away is, to give the parts affected a sudden, vigorous, and violent shock, which he may do in the air as he swims on his back.

"During the great heats in summer there is no danger in bathing, however warm we may be, in rivers which have been thoroughly warmed by the sun. But to throw one's self into cold spring water, when the body has been heated by exercise in the sun, is an imprudence which may prove fatal.

"The exercise of swimming is one of the most healthy and agreeable in the world. After having swam for an hour or two in the evening, one sleeps coolly the whole night, even during the most

ardent heats of summer. Perhaps the pores being cleansed, the insensible perspiration increases and occasions this coolness."

Every person, male and female, should learn to swim. Every school should have its swimming bath, with male and female teachers. Better still if parents taught their children to swim in infancy, before they had the sense of fear, as is done by the natives of the South Sea Islands, where the whole population is as much at home in the sea as on shore, and where the ships of the early explorers were boarded at considerable distances from shore by both men and women, who swam round them like so many water-fowls. In France all soldiers are taught to swim as a part of their drill exercise.

Women swim more easily than men. Their bony skeletons are lighter, they are better furnished with adipose tissue—the softer fatty portions of their bodies—and their heads are smaller, though perhaps of a finer quality. Though the French are said not to be as good sailors as the English, more Frenchmen can swim. More Parisians swim than Londoners. Thousands swim every summer day in the great swimming-baths anchored in the Seine as it flows through Paris. And French ladies at Biarritz and Dieppe have astonished English visitors by their feats in natation—going off in a boat in a neat bathing-dress, taking a header from the stern, and swimming ashore before breakfast. I have visited many English bathing places, and cannot remember having seen more than four or five ladies who were tolerably good swimmers.

Tamarinds.—This fruit is slightly nutritive, refrigerant, and gently laxative, and, having an agreeable flavour, will generally be eaten by children when they will not take other medicines. No mother need be afraid to allow her children to partake of this fruit in moderation. The usual dose is from half-an-ounce to one ounce of the fruit; but a very pleasant drink, called tamarind whey, is made by boiling an ounce of tamarind pulp with a pint of milk, and then straining it. The common drink is made by dissolving one ounce of the pulp in a pint of warm water, allowing it to get cold, and then straining.

Tannin.—This is an active astringent principle of the nut-gall. When exposed to the atmosphere (we quote from Dr. Spencer Thomson) in a state of moisture, it appears to attract oxygen, and to be converted into gallic acid. Both tannin and gallic acid are powerful astringents, and are widely diffused as the astringent principle throughout the vegetable kingdom. The former is met with in the form of a yellowish powder, the latter in fine, white, silky-looking crystals. Both are soluble in water, and in solution are used externally for the same purposes as astringents generally, from half a drachm to a drachm in half a pint of water forming an astringent lotion.

Tansy.—This herb is found on banks, hedges, and borders of fields in most parts of the middle of Europe, and very frequently in England. It is perennial and easily propagated by seed, and also by parting the roots in spring, and planting them in any sort of light soil or situation. Tansy has a strong and aromatic smell, and a bitter taste. It is tonic and stomachic, and has the usual qualities attributed to the bitters of the warm or aromatic kind; it was formerly much used in puddings, but has of late years been neglected, and is now seldom used as a culinary vegetable or medicinal herb.

Tapestry, Old, To Dry Clean.—Take a good strong, long-haired clothes brush, and brush the tapestry well; and have a pointed brush to remove all dust out of the corners. Now prepare for cleaning it by melting a bar of soap in one gallon of water, and when melted, put one quart of it in one gallon of clean cold water; have at hand by you some pieces of flannel, a soft brush, a piece of wash-leather, and some dry clean sheets. If the tapestry is on the wall, begin to clean it at the top, and only clean one square yard at a time. Now dip your flannel in the soap and water pail, squeeze it out gently, and rub it well into the tapestry, so as to make it lather; have a soft brush, and brush the square you are cleaning well; after this

wring the flannel out of the soap, and rub it dry with the soapy flannel and wash-leather, and sheet the spot dry, with the soap in it, as it must not be rinsed. Put two gallons of clean water in a pan, and melt four ounces of tartaric acid in a pint of boiling water, then put it in the pan with the cold water; have a clean sponge and put it in this acid water, squeeze it, and rub it well into the spot you have just cleaned and dried, and when this is done it must be well dried with a dry sheet before it is left; when this last process is finished, move on to the next top square yard, and go on exactly in the same manner as the first square; and so on, square after square, until all is cleaned. You must not continue to use the same soap and water you are cleaning with always; when it gets dirty, throw it away and make up fresh; also change the spirits, the flannels, and sheets, for they must be used clean. (See *Carpets, to Clean.*)

Tarragon.—The leaves of this plant are eaten with beef-steaks as horse-radish is with roast beef; they have a fragrant smell and aromatic taste. Of late years tarragon has been much used in various kinds of soups, and the French frequently use it in their salads to correct the coldness of other herbs. The leaves and young tops are used as ingredients in pickles, and a simple infusion of them in vinegar makes an agreeable fish sauce.

Tart.—See *Rhubarb Tart.*

Tartaric Acid.—An organised acid, obtained chiefly from the crude tartar formed on the inside of casks in which wine has been kept. In the berries of the ash and the tamarind it is also to be found. This acid exhibits a powerful tendency to form two salts, as the following: *bitartrate of potash*, or cream of tartar. It is sparingly soluble in cold water, requiring about one hundred and seventy times its own weight for solution. It is used in medicine as a refrigerant and diuretic, in doses of one half to one drachm, and as an aperient in doses of from five to six drachms. *Tartrate of potash* (the second salt) is much used in medicine as an aperient. Tartrate of potash and antimony, or tartar emetic, has long been extensively used in medicine.

Tassel Pincushion.—This novel pincushion is very easily made, and has a most elegant appearance. The foundation of the tassel pincushion must be strong and firm. It can be made of cardboard; but in this case, extreme care must be used for the joins not to show, as that would much detract from the neatness which is so requisite in every article of fancy-work. The better way is to take some long strips of smooth cartridge paper, rather wider than the depth of the whole pincushion, and make a shape by winding them round and round a cylinder. A smooth jelly-jar makes a very good mould for this purpose. The strips of paper must be damped with a sponge, and then pasted on the other side, after which they are to be carefully passed round the jar. Of course, a length sufficient to enclose the mould must be left without paste, otherwise it will not separate from it when it is dry. In the process, the paper must be well rubbed down, and in taking a fresh strip, the edges must not over-lap each other, as the join would then show. When completed, the moulded frame-work must be left until the next day, when the margins both of the top and the bottom being neatly cut, the work can be continued.

This frame is now to be covered with velvet, carefully and strongly stitched over its edges, both at the top and at the bottom. An inner case for the cushion having been filled with wool, and covered with velvet sufficiently large for the surface to rise above the shape, also well stitched down all round, must be inserted in the inside of the frame, and in its turn carefully secured.

The pincushion should be ornamented by beads in diamond-work, which is thus accomplished:—Thread first a row of loops, and then form the diamond by successive loops, continued by taking up the central bead of the first, and so repeating. The roll of beads at the top and bottom of the cushion are then to be added. These may be done in different ways, according to taste; a roll or a plait of beads looks equally well. The roll is

easily done by taking a few strings of beads and sewing them on, the silk of each encircling-stitch being also covered with beads; but always remembering to take the same number in the needle.

The tassels are made best by threading a long string, dividing it into the proper lengths, fastening it in the middle with a needleful of silk, threading both ends into a strong needle, passing it through the large beads, which forms its head, and, with the same silk, fastening it on the shape; these tassels being too heavy to be left suspended from the diamond bead-work.

The beads for this pincushion should be about equal quantities of chalk-white and transparent white, relieved by a smaller portion of steel. In threading for the tassels, a certain length of silk should be allowed for the chalk-white loops, and the same length for the transparent white. Five loops of each of these, with three or four of the steel, make a pretty tassel.

Ruby-coloured velvet forms an excellent contrast with these white beads; but there are other colours which are very handsome also in their effect, so that the choice is open as a matter of taste.

Tea.—On the Continent tea is often used medicinally, where, from it not being the practice to drink tea as a common beverage, it is often advantageously administered for the relief of many nervous affections. Green tea is the most powerful in its effects, and acts strongly on the nervous system, causing sleeplessness, headache, and even violent itching of the muscles; but this is when it is taken to excess, or by persons of extreme irritability of constitution. The infusion of tea, taken in moderation, tends to exhilarate, and will frequently relieve headache arising from fatigue, study, or anxiety; it is the most refreshing beverage that can be taken during a journey, as it raises the animal spirits, keeps up the insensible perspiration, and does not leave behind it any of those febrile symptoms which follow wine, beer, and similar drinks.

When the brain and nervous system are disposed to sthenic excitement, or, in other terms, to inflammatory action, such as follows the use of alcoholic drinks, intense study, and continued anxiety, green tea will be found to act as a salutary remedy; but in such cases as evince diminished excitement, sleeplessness and disturbance will follow the use of it. It has been observed, that persons who use tea are not liable to calculous affections. The fact may be, that those who do not drink tea take other things which tend to produce those diseases. Green tea is the only beverage for the nurse who has the care of a patient during the night.

Tea best in the Morning.—Tea, as the morning beverage, when breakfast forms a good substantial meal upon which the powers of the day for meeting the various chances and changes of life depend, provided it be not too strong, is much to be recommended, especially during the spring and summer; but when individuals eat little, coffee certainly supports them in a more decided manner; and besides this, tea, without a certain amount of solid aliment, is much more likely to influence the nervous system. Some persons, if they drink tea in the morning and coffee at night, suffer much in the animal spirits and in power of enjoyment of the pleasures of society; but if they reverse the system, and take coffee in the morning and tea at night, they reap benefit from the change: for the coffee, which to them, in the morning, is nutritious, becomes a stimulus at night; and the tea, which acts as a dilutant at night, gives nothing to support exertions during the day. (See *Meals* and *Adulterations.*)

Tea-Cake.—Rub into a quart of dried flour of the finest kind, a quarter of a pound of butter; then beat up two eggs with two teaspoonfuls of sifted sugar, and two tablespoonfuls of washed brewer's or unwashed distiller's yeast; pour this liquid mixture into the centre of the flour, and add a pint of warm milk as you mix it; beat it up with the hand until it comes off without sticking; set it to rise before the fire, having covered it with a cloth; after it has remained there an hour, make it up into good-sized cakes an inch thick; set them in tin plates to rise before the fire during ten minutes, then bake them in a slow oven.

These cakes may be split and buttered hot from the oven, or split, buttered and toasted after they are cold.

Tea, Sage.—In ancient times this herb was considered a remedy of general efficacy in all diseases; hence the old adage, "Why should a man die while he has sage in his garden?" At present, however, few practitioners consider it as an article of much importance in medicine. Although frequently employed as a sudorific, it seems to have no advantage, in this respect over many other plants. The Chinese value it highly, and prefer it to their own tea. The Dutch have long been in the habit of drying sage leaves in great quantities, and taking them out to China, where, for every pound of sage, they get in exchange four pounds of tea. It is a perennial, and is a native of the South of Europe. It is readily increased by planting slips or cuttings in April.

Teas.—As the names of the different kinds of tea relate to the time of their being gathered, or to some peculiarity in their manufacture, consumers should know something about them.

It is a general rule that all tea is fine in proportion to the tenderness and immaturity of the leaves. The quality and value of the different kinds diminish as they are gathered later in the season, until they reach the lowest kind.

Black Teas.—As soon as the leaf-bud begins to expand, it is gathered to make Pekoe. A few days' later growth produces what here is called *Black-leaved Pekoe*. The next picking is called *Souchong*. As the leaves grow larger and more mature they form *Congou*; and the last and latest picking is called *Bohea*.

Bohea is called by the Chinese *Ta-che* (large tea), on account of the maturity and size of the leaves. It contains a larger proportion of woody fibre than other teas, and its infusion is of a darker colour and coarser flavour.

Congou, the next higher kind, is named from a corruption of the Chinese *Koongfoo* (great care, or assiduity). This forms the bulk of the black imported, and is most valued for its strength.

Souchong, *Scaon-chong* (small, scarce sort), is the finest of the stronger black tea, with a leaf that is generally entire and curly. It is much esteemed for its fragrance and fine flavour.

Pekoe is a corruption of the Canton name (Pak-ho), white down, being the first sprouts of leaf-buds; they are covered with a white silky down. It is a delicate tea, rather deficient in strength, and it is principally used for flavouring other teas.

Green Teas.—The following are the principal kinds:—*Twankay, Hyson-Skin, Hyson, Gunpowder*, and *Young Hyson*.

Young Hyson (when genuine) is a delicate young leaf, called in the original language, *Yu-tsien* (before the rains), because gathered in the early spring.

Hyson, from the Chinese word, *He-tchune*, which signifies flourishing spring. This fine sort of tea is gathered in the early part of the season. There is extreme care and labour used in the preparation of this tea; each leaf is picked separately, and nipped off above the foot stalk, and every separate leaf is twisted and rolled by the hand. It is much esteemed for its agreeable flavour.

Gunpowder, as it is called, is nothing but Hyson rolled and rounded to give it the *granular* appearance whence it derives its name. The Chinese call it *Choo-cha* (pearl tea).

Hyson-skin is so named from the original Chinese term, in which connection the *skin* means the refuse or inferior portion. In preparing Hyson, all those leaves that are of a coarse yellow, or imperfectly twisted appearance, are separated and sold as *skin tea*, at an inferior price.

Twankay is the last picking of green tea, and in addition to the leaf being older it is not so much rolled or twisted as the dearer descriptions; there is altogether less trouble bestowed on its preparation.

Tea and Coffee.—The infusion of these grateful exhilarants in boiling water, as ordinarily practised, in moderation, there is no great objection to, provided they are not taken too hot or too frequently. They should, in a general way, be confined to the breakfast-table, and to persons of an adult age. The young require no excitants

of any kind; milk to them is more suitable, abounding, as it does, in nourishment, which is a quality that neither tea nor coffee possesses. We have observed that tea or coffee, in a general way, should be confined to the breakfast-table, though a cup of one or the other may, without any great objection, be taken by most persons in the evening. We mean by this reservation to say, that there are many who would sleep better, and enjoy much better health, were they not to do so. The exciting qualities of tea upon the nervous system are rendered very apparent by the sleepless nights induced to those unaccustomed to its use in the evening; and coffee, in most cases, will produce the same effects. To persons, therefore, who are the subjects of any spasmodic or nervous affection, although sleeplessness may not be induced, they are nevertheless clearly prohibited. And to the dyspeptic—another large class of persons—the sugar and hot water, in which they are infused, render them equally objectionable; whereas, cold water, saturated as it is with atmospheric air, possesses positively beneficial virtues in many such cases.

Tea and Coffee, How to Make.—However good your tea and coffee may be, you can very easily spoil it in the making, if you do not set about it in the right way, so we will just give you a few hints on this part of the subject. In the first place, your teapot must be hot: this may be managed by pouring boiling water into it, and pouring it away the moment before you are going to make the tea. Then the tea itself must be hot, so you may put it in a cup on the hob and cover it over. But, above all, the water must boil at the very moment when you pour it on the tea; so you should not bring the kettle to the table, but should take the teapot to the kettle, and whilst the water is boiling, slant the kettle forward, and thus let the water boil out of the spout on to the tea. If you are using an urn on the table, do not attempt to pour the water on the tea unless the steam is coming violently out of the hole in the top of the lid, otherwise you will not extract the theine.

Tea and Coffee, Pouring Out.—There is more to be learned about pouring out tea and coffee than most young ladies are willing to believe. If these decoctions are made at the table, which is by far the best way, they require experience, judgment, and exactness; if they are brought on the table ready-made it still requires judgment so to apportion them that they shall prove sufficient in quantity for the family party; and that the elder members should have the stronger cups. We have often seen persons pour out tea, who, not being at all aware that the first cup is the weakest, and that the tea grows stronger as you proceed, have bestowed the poorest cup upon the greatest stranger, and given the strongest to a very young member of the family, who would have been better without any. Where several cups of equal strength are wanted, you should pour a little into each, and then go back, inverting the order as you fill them up, and then the strength will be apportioned properly. You should learn every one's taste in the matter of sugar and cream too, in order to suit them in that respect. Delicacy and neatness may be shown in the manner of handling and rinsing the cups, of helping persons to sugar, and using the cream-pot without letting the cream run down from the lip. There are a thousand little niceties which will occur to you, if you give due attention to the business, and resolve to do it with the thrift of a good housekeeper and the ease and dignity of a refined lady. When once good habits have been acquired in this social department, it will require less attention, and you will always do it in the best way without thinking much about it.

Teeth, Anatomy and Physiology of the.—Sugar has had the bad repute of causing the teeth to decay of those who frequently use it. That character, however, has been proved to be unmerited. Its origin can probably be traced to the penuriousness of certain housekeepers, and the stigma can be readily disproved by abundant evidence. Probably the habitual use of hot drinks conduces more towards teeth disease than any other single cause; the

habitual use, too, of hard tooth-brushes exercises a most pernicious influence on the teeth. When the gums of a person who habitually uses tooth-brushes of this kind are examined, they are found to be more or less destroyed towards the roots of the teeth, thus denuding the latter by drawing from them the supply of blood necessary to their vitality, and in this manner establishing preternatural decay. The habitual or even occasional employment of hard tooth-brushes is a great mistake. No specimen of hogs' bristles can well be too soft for this use, and when employed in conjunction with a suitable dentifrice, will efficiently answer the purpose for which tooth-brushes are intended. Even a soft-haired tooth-brush may, in many cases of irritable gums, be advantageously dispensed with in favour of a sponge rubber, an instrument which may be easily prepared by tying a piece of sponge to the handle of a worn-out tooth-brush.

Teeth, Artificial.—"These are of various kinds" (we quote from Dr. Scoffern, in his "Philosophy of Common Life"):—"natural teeth, carved ivory, of a very hard description, furnished by the core of the molars of the hippopotamus; and lastly, mineral or enamel teeth. Preference will be given to one or the other, according to various circumstances. Mineral teeth possess the admirable quality of never staining; they are totally unabsorbent, and therefore never discolour. These are great advantages; but as a set-off they are more brittle than either natural teeth or carved blocks of hippopotamus ivory; hence, although they answer admirably well for supplying the place of large, massive molars, they are unsatisfactory as substitutes for the thin incisors, or front teeth, or even shallow molars, such as are rendered necessary in cases where the underlying stump, instead of being extracted, is cut off, and the false tooth, attached to a shield or cap—is fixed outside.

Natural teeth are, all things considered, the best for supplying the place of incisors; these, when single, cut off level with the gum, a mode of attachment less conspicuous than any other, but which is deficient in strength as compared with the method of fixing them by a point to a gold or ivory palate.

In some cases teeth, both molar and canine, and incisors, are carved, palate and all, out of a piece of hippopotamus ivory; and occasionally the palate is stained red, the better to imitate the colour of the natural gum. People who can afford to have duplicate sets of false teeth, and to replace them yearly, may adopt this invention; otherwise ivory teeth and ivory palates should be avoided; they both readily stain, and are then repulsive to more than one sense.

When teeth are screwed upon a stump, there, of course, they must remain, being fixtures; but teeth attached to palates should be removed every night, placed in cold water, and merely cleansed with a brush before replacement.

Teeth, Cements for Stopping the.—A drachm of gutta percha, softened by hot water, is to be worked up with catechu powder and tannic acid, of each half a drachm, and with a drop of essential oil. For use a morsel is to be softened over the flame of a spirit lamp, introduced while warm into the cavity of the tooth, and adapted properly. The mass becomes hardened, and, even after several months, exhibits no traces of decomposition. M. Ponton states that we may also obtain an excellent cement by dissolving one part of mastic in two of collodion. Having well dried out the cavity, a small ball of cotton, soaked in some drops of the solution, is to be introduced. It soon solidifies, and may remain permanently in the tooth.

"Teeth Set on Edge."—All acid fruits, drinks, medicines, tooth-washes and powders, are very injurious to the teeth. If a tooth is put in cider, vinegar, lemon-juice, or tartaric acid, in a few hours the enamel will be completely destroyed, so that it can be removed by the finger-nail as if it were chalk. Most have experienced what is commonly called teeth set on edge. The explanation of it is, the acid of the fruit that has been eaten has so softened the enamel of the teeth, that the least pressure is felt by the exceedingly small nerves which pervade the thin membrane which connects the enamel and the bony part of

the teeth. Such an effect cannot be produced without injuring the enamel. True, it will become hard again when the acid has been removed by the fluids of the mouth, just as an eggshell that has been softened this way becomes hard again by being put in the water. When the effect of the sour fruit on the teeth subsides they feel as well as ever, but they are not so well; and the oftener it is repeated, the sooner the disastrous consequences are manifested.

Teeth, Tincture for the.—Take of Florentine iris root eight ounces, bruised cloves one ounce, ambergris one scruple. Bruise the root, and put the whole ingredients into a glass bottle, with a quart of rectified spirits of wine. Cork close, and agitate it once a day for a fortnight, keeping it in a warm place. About a teaspoonful is sufficient at a time; in this, a soft tooth-brush should be dipped, and then worked into a lather on the teeth and gums. It cleanses the teeth, strengthens the gums, and sweetens the breath. Apply the tincture in the morning, and before retiring to rest.

Telegraph, Electric. — See *Electric Telegraph.*

Tell-Tale Little Finger, Game of.—This parlour-game is intended for young ladies; if, however, a few young gentlemen are of the company, their presence may contribute to render it the more amusing.

All the company place themselves in a semi-circle, within which is a seat more elevated than the rest, for the schoolmistress, whom they at once proceed to choose. The latter selects another of the company, who takes her place on a stool in front of her companions, and must be prepared to answer all the accusations which the mistress may bring against her.

Mistress. You ventured to go out yesterday without my permission; where did you go?

Accused. To my aunt's. (Here she points to one of her companions, who must at once answer, "Yes, mistress," or pay a forfeit.)

Mistress. That is not all; you have been somewhere else, my *thumb* tells me so. (At the word *thumb* the *accused* answers—"It knows nothing about it," which she repeats until the *mistress* names another finger.)

Mistress. And, what is worse, you did not go alone.

Accused. It knows nothing about it.

Mistress. Still it says that you were in a grove.

Accused. It knows nothing about it.

Mistress. And that a handsome young man was there at the same time.

Accused. It knows nothing about it.

Mistress. You have even dined in company with him. It is my *middle finger* tells me this.

Accused. Do not believe it. My neighbour knows to the contrary. (She points to another young lady, who must answer —"Yes, mistress.")

Mistress. After the dinner, which lasted for a long time—

Accused. Do not believe it.

Mistress. The young man brought you back in a carriage—

Accused. Do not believe it.

Mistress. And the carriage was overturned in crossing a brook—

Accused. Do not believe it.

Mistress. And when you returned, your dress was wet and torn.

Accused. Do not believe it. I can bring the testimony of one, two, or three of my companions. (She points towards those who are inattentive to the game in preference to the others.) They must answer—"Yes, mistress," or pay a forfeit.

Mistress. It is my *little finger* that has told me so.

Accused. Pardon me, mistress, it has told a falsehood. (All the young ladies say at the same time—"Ah, the wicked little finger!")

Mistress. It insists upon it, however.

Accused. It has told a falsehood. Ask all my companions.

All, without uttering a word, lift up the right hand, as if to attest the falsehood of the accusation. The slightest hesitation is punished by a forfeit.

Mistress. It says that all these young ladies tell a falsehood.

All rise. Those who keep their seats pay a forfeit. The accused returns among her companions, a new mistress is chosen, who designates a new culprit, and the game continues.

If, on the contrary, the first mistress, content with the testimony which the young ladies have given without rising, announces that the little finger declares it was mistaken, she can bring forward new charges, to which the culprit must answer in the same manner as before described.

Temper, Good and Bad.—A bad temper is a curse to the possessor, and its influence is most deadly wherever it is found. It is always martyrdom to be obliged to live with one of a complaining temper. To hear one eternal round of complaint and murmuring, to have every pleasant thought scared away by this evil spirit, is a sore trial. It is like the sting of a scorpion, a perpetual nettle destroying your peace, and rendering life a burden. It has been truly said, that while we ought not to let the bad temper of others influence us, it would be as unreasonable to spread a blister upon the skin and not expect it to draw, as to think of a family not suffering because of the bad temper of any of its inmates. One string out of tune will destroy the music of an instrument otherwise perfect; so, if all the members of a church, neighbourhood, and family, do not cultivate a kind and affectionate temper, there will be discord and evil work.

As to good temper, Charles Swain shall speak of that:—

"There's not a cheaper thing on earth,
Nor yet one half so dear;
'Tis worth more than distinguished birth,
Or thousands gained a-year.
It lends the boy a new delight,
'Tis virtue's firmest shield,
And adds more beauty to the night,
Than all the stars may yield.
A charm to banish grief away,
To snatch the brow from care;
Turn tears to smiles, make dulness gay,
Spread gladness everywhere.
And yet 'tis cheap as summer dew
That gems the lily's breast;
A talisman for love as true
As ever man possessed.
What may this wondrous spirit be
With power unheard before—
This charm, this bright divinity?
Good Temper! nothing more!
Good temper! 'tis the choicest gift
That woman homeward brings,
And can the poorest peasant lift
To bliss unknown to kings."

If women knew their power, and wished to exert it, they would always show sweetness of temper, for then they are irresistible. The woman of sensibility who preserves serenity and good temper amid the insults of a brutal husband, wants nothing of an angel but immortality. The *difficult* part of good temper consists in forbearance and accommodation to the ill-humour of others.

Cowper, in the following lines, has well illustrated the miseries of a fretful temper:—

"Some fretful tempers wince at every touch,
You always do too little, or too much;
You speak with life, in hopes to entertain—
Your elevated voice goes through the brain;
You fall at once into a lower key—
That's worse!—the drone-pipe of an humble bee.
The southern sash admits too strong a light,
You rise and drop the curtain—now 'tis night;
He shakes with cold—you stir the fire, and strive
To make a blaze—that's roasting him alive.
Serve him with venison, and he chooses fish—
With sole—that's just the sort he would not wish.
He takes what he at first profess'd to loathe,
And in due time feeds heartily on both;
Yet still o'erclouded with a constant frown,
He does not swallow, but he gulps it down.
You hope to please him, vain on every plan,
Himself should work that wonder if he can!
Alas! his efforts double his distress,
He likes yours little, and his own still less.
Thus always teasing others, always teased,
His only pleasure is—to be displeased."

Temper on Health, Influence of.—Excessive labour, exposure to wet and cold, deprivation of sufficient quantities of necessary and wholesome food, habitual bad lodging, sloth and intemperance, are all deadly enemies to human life; but they are none of them so bad as violent and ungoverned passions. Men and women have survived all these, and at last reached an extreme old age; but it may be safely doubted whether a single instance can be found of a man of violent and irascible temper, habitually subject to storms of ungovernable passion, who has arrived at a very advanced period of life. It is therefore a matter of the highest importance to every one desirous to preserve "a sound mind in a sound body," so that the brittle vessel of life may glide down the stream of time smoothly and securely, instead of being continually tossed about amidst rocks and shoals which endanger its

existence, to have a special care, amidst all the vicissitudes and trials of life, to maintain a quiet possession of his own spirit.

Temperaments, The.—We quote from Mrs. Shimmelpennick that there are four temperaments: choleric and sanguine, *active*; phlegmatic and melancholic, *passive*; sanguine is characterised by activity; choleric by force; phlegmatic by inertness; melancholic by sensibility. In sanguine and choleric the outline is convex; phlegmatic and melancholic outline with concavities.

Sanguine. — Convexities united by angles; features, salient; complexion, pink; hair, red and crisped; light of eyes, sparkling; colour, blue; voice, sharp; movements, agile and with elasticity; attitudes, with spring, bird-like, constant in motion.

Choleric. — The muscles strongly defined; complexion, bilious; eyes, dark; light of the eyes, flashing; nostrils, *well pronounced*; hair, black and curled strongly; gestures, violent; voice, deep and harsh; shaggy eyebrows; the mouth closes determinately; jaw-bone marked forcibly.

Phlegmatic. — The body bears a large proportion to the limbs, and the plane of the face to the features; complexion, sodden; features, sunk, not well formed; hair, hempen and lank; eyes, open, dull, grey in colour; eyebrows, an unmeaning arch; cheeks, pendulous; lips, thick, without coarse expression; voice, uninflected and deep; attitude, without gesticulation; light of the eyes, tranquil.

Melancholic. — Features in a concave basis; cheekbone, flat, without muscular constriction; white manifest under the iris of the eye; hair, lank, dark in colour; voice, unsubstantial, susceptible of modulation; chest falls in; limbs long in proportion to their figure; light of the eyes, sparkling; attitude, pensive.

The sanguine will be an entertaining companion, not deep.

The choleric a brave champion, not tender.

The melancholic, a warmly-attached friend.

The phlegmatic, ballast, rest.

It is always desirable there should be an active and passive temperament. The character is likely to be poor without this union. If there are only the two passive temperaments the character is without spring, and little able to help itself. If the two active, there is little quiet or rest between the violence of the choleric and the restlessness of the sanguine. The finest characters generally possess all four temperaments.

Temperature, Average.—Annexed is a table, by Admiral Fitzroy, of average temperatures between 8 and 9 o'clock a.m. near London, which may be used, with allowance for *ordinary differences* between Greenwich temperatures and others, to assist in foretelling the direction and nature of coming wind and weather.

The thermometer (shaded and in open air), when much *higher*, between 8 and 9 a.m., than the *average*, indicates southerly or westerly wind (tropical); but when considerably lower, the reverse, or northerly (polar) currents of air.

These indications are not yet so generally familiar as they ought to become, being easily marked, and very useful practically.

The average temperatures at Greenwich, in the shade and open air, between 8 and 9 a.m., are nearly the *mean temperature of each twenty-four hours*, taking the year through around London; and with allowance for the *difference* between the *means* of Greenwich temperatures and those of other places, they may be taken for the British Islands generally, as follows, for about the middle of—

January	37°	July	62
February	39°	August ...	61
March	41°	September ...	57
April ...	46°	October ...	50
May ...	53°	November ...	43
June ...	59°	December ...	39

And proportionally between each such middle period.

Temperature, Night.—Dr. Stark says "One of the most important elements bearing on vital statistics is night temperature. It is the night temperature far more than that of the day which has the most deleterious influence

on human life. He recommends that, along with the statistics of mortality, both the absolute, and the mean lowest or night temperature should be published. Experience in Scotland has shown that an excessively cold night, when the temperature falls to ten degrees, or to five degrees, or below zero, the change is most fatal to the aged, to the very young, and to those weakened by disease. In some of the smaller parishes of Scotland, a cold night has been known to kill all the persons above 80 years of age.

Tench.—These fish, like the carp, are generally considered pond fish, although they have been frequently caught in the river Stour. They shed their spawn about the commencement of July, and are in season from September to the latter end of May. They will bite very freely during the sultry months. Their haunts are similar to those of the carp; except that they frequent the foulest and muddiest bottoms, where they may shelter themselves among an infinite quantity of reeds; hence you must angle for them very near the bottom, and allow sufficient time to gorge the bait.

Thermometer, The.—This word means literally "measure of heat." The idea of determining the intensity of this subtle agent emanated with Sanctario, an Italian philosopher, in the year 1620.

His plan was improved upon by Fahrenheit, a German philosopher, who lived about the year 1720, and who was the inventor of the thermometer now used in this country and America. The form of Fahrenheit's thermometer is too well known to need description. Fahrenheit's thermometer is deficient in this respect, namely, that the inventor laboured under a mistake when he imagined 0, or zero, to be the extreme of cold. Zero is the temperature of equal parts of snow and salt, and Fahrenheit thought that point was destitute of all heat. Repeated experience has proved that the mercury often falls lower, even in temperate latitudes. The freezing point of water he marked by plunging his thermometer into water in that state, after having marked the degrees on his scale, and found it 32°; the heat of boiling water 212°; while other temperatures, such as summer heat, blood heat, and fever heat, are merely arbitrary marks supposed to be correct on the average. The only positive marks are the freezing point, 32°, and the boiling point, 212°.

French thermometers are differently marked, but equally wrong; as the freezing point is placed at the temperature of mingled snow and salt, or zero, when in reality water freezes at a much higher temperature. The boiling point in the thermometer in use in France is marked 100°. In Germany and Russia, the freezing point of the thermometer is also marked zero, and the boiling point 80°.

At 40° below zero mercury becomes solid; consequently, to mark the degrees of cold sometimes experienced in Russia and the Arctic regions, spirits of wine is used, which has never been known to freeze from natural causes, although it is said that a Scotch chemist once succeeded in producing such an extreme degree of cold as to freeze even alcohol. If he did so, he never divulged the secret of the chemical agency by which he effected it.

Thin, To become.—The following may be said to be one of the most successful prescriptions in producing leanness:—Take of anxiety as much as you can carry; of labour, twelve hours; of sleep, five hours; of food, one meal; of disappointed love, one season; of blighted friendship, half-a-dozen instances. Let these ingredients be mixed carefully with a considerable weight of debt, in a mind from which all religious remedies have been excluded—and excessive leanness will be produced.

Thirst.—This is a peculiar sensation in animated nature which follows the desire to drink. During the processes of the animal functions a considerable quantity of moisture is consumed, the loss of which must be supplied; and thirst is the voice of nature calling upon the animal to supply the place of the lost moisture by drinking. Water is the proper object of this desire; and the quantity necessary for this purpose varies

greatly, according to the many circumstances of individuals; and still more, according to the nature of the food taken, the state of the atmosphere, the mode of life, and the peculiar habits of the person. An external application of moisture is found to diminish thirst, which is a sensation far more difficult to sustain than hunger, leading from restlessness to anxiety, anxiety to despair, and even insanity.

Three, The Number.—When the world was created we find land, water, and sky; sun, moon, and stars; Noah had but three sons; Jonah was three days in the whale's belly; our Saviour was three days in the tomb; Peter denied his Saviour thrice. There were three Patriarchs—Abraham, Isaac, and Jacob. Abraham entertained three angels. Samuel was called three times. "Simon, lovest thou me?" was repeated three times. Daniel was thrown into a den with three beasts, for praying three times a day. Shadrach, Meshach, and Abednego were rescued from the flames of the oven. The Ten Commandments were delivered on the third day. Job had three friends. St. Paul speaks of faith, hope, and charity, these three. Those famous dreams of the baker and butler were to have taken place in three days; and Elisha prostrated himself three times upon the body of the dead child. Samson deceived Delilah three times before she discovered the source of his strength. The sacred letters on the cross are three, I.H.S.; so also the Roman motto was composed of three words, "In hoc signo." There are three conditions for man—the earth, heaven, and hell; there is also the Holy Trinity. In mythology, there were the three oracles; Cerberus, with his three heads; Neptune holding his three-toothed staff; the Oracle of Delphi cherished with veneration the Tripod; and the nine muses sprang from three. In nature we have male, female, and offspring; morning, noon, and night. Trees group their leaves in threes. We have fish, flesh, and fowl. What could be done in mathematics without the aid of the triangle? Witness the power of the wedge. In logic three premises are indispensable. It is a common phrase that "three is a lucky number."

Throat, Foreign Bodies in the.—Persons are frequently in danger of suffocation from fish-bones, pins, &c., which stick in the throat. The moment an accident of this kind occurs, desire the patient to be perfectly still; open his mouth, and look into it. If you see the obstruction, endeavour to seize it with your finger and thumb, or a long, slender pair of pincers. If it cannot be got up, and is not of a nature to do any injury in the stomach, push it down with the handle of a spoon, or a flexible, round piece of whalebone, the end of which is neatly covered with a roll of linen, or anything that may be at hand. If you can neither get it up nor down, place six grains of tartar emetic in the patient's mouth. As it dissolves it will make him excessively sick, and in consequence of the relaxation, the bone, or whatever it may be, will descend into the stomach, or be ejected from the mouth. If a pin, button, or other metallic or pointed body has been swallowed or pushed into the the stomach, make the patient eat plentifully of thick rice-pudding.

Thunder-Storm, Best Means of Safety during a.—The best means of safety in a thunder-storm would be to maintain the horizontal rather than the upright position; to avoid the contact of metallic substances. If out of doors, not to take shelter under trees, which are equally good conductors of the electric fluid with animal bodies; to keep the clothes dry; and to retire into a vaulted cellar, if under the domestic roof, where no conductor is attached to the building; or to keep in the middle of a room with a boarded floor; or, which is better, to lie down on a feather bed. *The covering* of a looking-glass during a storm can add no safety to the house or room. It prevents it reflecting the light given out by the electric discharge, but the covering can produce no other effect. Lightning can only produce an effect upon the human body when it is the object through which the fluid passes to the earth. Thus it is dangerous to stand or sit aganist a wall, because the body is a better conductor than the substance

of the wall, and the electric fluid would therefore pass from the wall through the body, and so to the earth. If the wall was of iron—the iron being the better conductor—no such accident would occur. Houses with lead coverings and metal spouts running to the earth are less dangerous than those covered with tiles or slates, with wooden spouts. On a wide and open heath, where no house shelter can be obtained, the safest plan in case of alarm is to lie down flat upon the earth.

Thyme.—This plant will grow anywhere, but it prefers a dry, poor soil; if the ground is rich, the plant will become too luxuriant, and lose its aromatic qualities. There are several varieties; that preferred for culinary purposes is the lemon-scented, it is also the handsomest in appearance. It is propagated by seeds or slips. Sowing should be performed from the middle of March to the middle of May; slips should be set out in the spring. It may also be propagated by layers, like carnations. Although a perennial, it becomes stunted after two or three years, and to ensure it in perfection the seed should be sown annually. The culinary use for thyme is principally for broths and ragouts; it is also a common ingredient in stuffings and to savour meats. The lemon-thyme is less pungent than the common garden thyme, but much more grateful; hence it is used as a seasoning for veal and other meats, where lemon-peel would be used, thus answering the purpose of two distinct spices. Thyme that is intended for winter use should be cut when in blossom, and after being well dried in the shade, hung up in paper bags. Lemon-thyme can be propagated either by slips or by parting the roots, almost every bit of which will grow, provided they are planted in a light, dry soil.

Time and Regularity.—There is in many people, and particularly in youth, a strange aversion to regularity—a desire to delay what ought to be done immediately, in order to do something else which might as well be done afterwards. Be assured it is of more consequence to you than you can conceive, to get the better of this idle, procrastinating spirit, and to acquire habits of constancy and steadiness, even in the most trifling matters. Without these there can be no regularity or constancy of action or character; no dependence on your best intentions, which a sudden humour may tempt you to lay aside for a term, and which a thousand unforeseen accidents will afterwards render more and more difficult to execute. No one can say what important consequences may follow a trivial neglect of this kind. Valuable friends have been lost by delaying to write to them so long that, having no good excuse to offer, courage could not be mustered at last to attempt it at all, and dropped their correspondence entirely. Never permit a letter to remain long unanswered; it is a mark of great disrespect, and may be treated as insulting.

Time Table.—

60 seconds	...	make	1 minute
60 minutes	...	,,	1 hour
24 hours...	...	,,	1 day
12 hours...	...	,,	1 working day
7 days ...	...	,,	1 week
4 weeks	...	,,	1 lunar month
13 lu. months 1 day, or 52 weeks 1 day, or 12 cal. months		,,	1 year
365 days 6 hours		,,	1 Julian year
365 days 5 hours 48 minutes 57 seconds 39 thirds	...	,,	1 solar year
366 days	...	,,	1 leap year
100 years	...	,,	1 century

Titles, Terms, and Degrees, ABBREVIATIONS OF.—

A.A.G. Assistant Adjutant-General.
A.B. *Artium Baccalaureus*, Bachelor of Arts.
Abp. Archbishop.
A.D. *Anno Domini*, in the year of our Lord.
Admors. Administrators.
Æ. *Ætatis* (*Anno*), in the year of his age.
Affectly. Affectionately.
A.G. Adjutant-General.
A.G. Accountant-General.
A.G.E. Attorney-General of England.
Ald. Alderman.
Alexr. Alexander.
Alf. or Alfd. Alfred.
Alt. Altitude.

A.M. Master of Arts.
A.M. *Anno Mundi*, in the year of the world.
A.M. or a.m. (Time of day) *Ante Meridian*, before midnight—morning.
A.R.A. Associate of the Royal Academy.
A.R.S.A. Associate of the Royal Scottish Academy.
B.A. Bachelor of Arts.
Bart. Baronet.
BB. (drawing pencils) Black black. (Blacker than those marked B.)
B.C. Before Christ.
B.C.L. Bachelor of Civil Law.
B.D. Bachelor in Divinity.
Beds. Bedfordshire.
Berks. Berkshire.
B.I. British Institution.
B.L. Bachelor of Laws.
B.M. Bachelor of Medicine.
Bp. Bishop.
Brit. British, or Britain, or Britannia.
B.V. *Bene vale*, farewell.
B.V. Blessed Virgin.
C. *Centum*, a hundred.
Cap. *Capitulum*, chapter.
Capt. Captain.
Cantab. One educated at Cambridge.
C.B. Companion of the Bath.
CC. Two hundred.
C.C.E. Committee of Council on Education.
CCC. Three hundred.
C.C.C. Corpus Christi College.
CCCC. Four hundred.
C.E. Civil Engineer.
Ch. Chapter.
Chron. Chronology, or Chronicle.
C.J. Chief Justice.
Co. Company and County.
Col. Colossians, Colonel, and Colonial.
Coll. College, Collection, and Collector.
Compts. Compliments and Accounts.
Cont. (music) *Contano*, they count (or rest).
Cr. Creditor.
C.S. Civil Service.
Cwt. A hundredweight.
Cor. Corinthians.
D. (Roman notation) Five hundred.
D. or d. (money) *Denarius*, a penny, or *Denarii*, pence.
D.D. Doctor of Divinity.
Deg. Degree.
Deut. Deuteronomy
Do. *Ditto*, the same.
Dox. Doxology.
Dr. Debtor, doctor, drachm, and dear.
D.V. *Deo volente*, God willing.
Dwt. Pennyweight.
Devon. Devonshire.
Ec., Eccl., or Eccles. Ecclesiastes.
Ed. Editor.
E.G. or e.g. *Exempli gratia*, for instance (example).
E.H.B. (drawing pencils) Extra-hard black.
E.N.E. East-north-east.
E.S.E. East-south-east.
Eng. England or English.
Eph. Ephesians.
Epiph. Epiphany.
Esq. Esquire.
Etc. (Various) *Et cætera*.
Etym. Etymology.
Eur. Europe and Euripides.
Ev., or Evg., or Even. Evening.
Ex. Example.
Exch. Exchange and Exchequer.
Ex. or Exod. Exodus.
Exors. Executors.
Ez. or Ezek. Ezekiel.
F.A. Fine Arts.
Fah. Fahrenheit.
F.A.S. Fellow of the Antiquarian Society.
Fcp. Foolscap.
Feb. February.
Fem. Feminine.
F.E.S. Fellow of the Ethnological Society.
F.G.S. Fellow of the Geological Society.
Fid. Def. *Fidei defensor*, Defender of the faith.
Fig. Figure.
F.L.S. Fellow of the Linnæan Society.
F.M. Field Marshal.
Fo. or fol. folio.
For. Foreign.
F.R.A.S. Fellow of the Royal Astronomical Society.
F.R.C.S. Fellow of the Royal College of Surgeons.
F.R.S. Fellow of the Royal Society.
F.S.A. Fellow of the Society of Arts.
Ft. Foot or feet.
F.Z.S. Fellow of the Zoological Society.
Gal. Galatians.
Gen. Genesis.
Gent. Gentleman.
G.P.O. General Post Office.

Gs. Guineas.
G.C.B. Grand Cross of the Bath.
Hab. Habakkuk.
Hants. Hampshire.
H.B. (drawing pencils) hard black.
Heb. Hebrews.
H.H. His (or her) Highness.
Hhd. Hogshead.
H.J. *Hic Jacet*, here lies.
H.M. His (or her) Majesty.
H.M.S. His (or her) Majesty's Ship.
Hon. Honourable and Honorary.
H.R.H. His (or her) Royal Highness.
I. (Roman Notation) One.
Ib. or Ibid. *Ibidem*, the same (as before named), in the same place.
I.E. (i.e.) *id est*, that is.
I.H.S. *Jesus Hominum Salvator*, Jesus the Saviour of Men.
Imp. Imperial.
In. Inch or Inches.
Incog. *Incognito*, in disguise.
Infra. dig. *Infra dignitatis*, beneath dignity.
I.N.R.I. *Jesus Nazarenus Rex Judæorum*, Jesus of Nazareth, King of the Jews.
Inst. *Instant*, the present month.
Int. Interest.
I.O.U. "I owe you."
J.C. Justice Clerk.
Je. or Jer. or Jerem. Jeremiah
Jno. John.
Jos. Joseph.
J.P. Justice of the Peace.
Jr. or Junr. Junior.
K.B. Knight of the Bath.
K.C.B. Knight Commander of the Bath.
K.G. Knight of the Garter.
K.T. Knight of the Thistle.
Kt. or Knt. Knight.
K.G.C.B. Knight Grand-Cross of the Bath.
L. (Roman Notation) Fifty.
L. *Libra*, Pound (twenty shillings) or Pounds.
Mac. Maccabees.
Maj. Major.
Mal. Malachi.
Mar. Marine and March.
Matt. Matthew.
M.B. Bachelor of Medicine.
M.B. Bachelor of Music.
M.C. Master of the Ceremonies.
M.D. Doctor of Medicine.
Mdlle. *Mademoiselle*, Miss.
Mem. Memorandum.
Messrs. *Messieurs.*
Mgr. *Monseigneur*, My Lord.
Michs. Michaelmas.
Mon. *Monsieur.*
Mos. Months.
M.P. Member of Parliament.
M.R.G.S. Member of the Royal Geographical Society.
Mr. Mister.
Mrs. Mistress.
MSS. Manuscripts.
N.B. *Nota bene*, mark well, notice, bear in mind.
N.B. North Britain.
N.E. North East.
Neh. Nehemiah.
Nem. con. *Nemine contradicente*, no one contradicting.
N.L. North Latitude.
N.N.E. North North East.
N.N.W. North North West.
Non compos mentis. Not of sound mind.
Nov. November.
N.W. North West.
Ob. or Obit. He died.
Oct. October.
Oct. or 8vo. A sheet of paper folded to form eight leaves.
Oz. Ounce.
P.C. Privy Councillor and Police Court.
Pet. Peter.
Ph.D. Doctor of Philosophy.
P.M. *Post meridian*, after mid-day (afternoon).
P.O. Post Office.
P.O.O. Post Office Order.
pp. Pages.
Pro tem. *Pro tempore*, for the time.
Prof. Professor.
Proximo. The coming (next) month.
P.S. *Post scriptum*, Postscript.
Ps. Psalm or Psalms.
Pt. Pint and Part.
Q. Question, Query.
Q.C. Queen's Counsel.
Qrs. Quires.
Qt. Quarts.
R. *Regina*, Queen, and *Rex*, King.
R.I.P. *Requiescat in pace*, May he rest in peace.
Sam. Samuel.
Sc. *Scilicet*, same as viz.
S.E. South East.
Sec. Section.

Sec. Secretary.
Sep. or Sept. September.
Serjt. Serjeant.
Servt. Servant.
S.M. Short Metre.
Solr. Solicitor.
Sov. Sovereign.
S.S.E. South South East.
S.S.W. South South West.
Sun. Sunday.
S.W. South West.
Syn. Syntax and Synonym.
Therm. Thermometer.
Thes. Thessalonians.
Tim. Timothy.
Typ. Printer.
Ult. *Ultimo*, the last (month).
U.S. United States.
V. (Roman Notation) Five.
v *Versus*, against.
v. *Vide*, see.
Ven. Venerable.
Vis. Viscount.
Viz. *Videlicet*, namely.
Vol. Volume.
V.R. *Victoria Regina*, Victoria the Queen.
W West.
Wed. Wednesday.
W.N.W. West North West.
W.O. War Office.
Wm. William.
W.S.W. West South West.
X. (Roman Notation) Ten.
Xmas. Christmas.
Yd. Yard.
Zec. Zechariah.
Zeph. Zephaniah.
Zoo. Zoology.

Toads in Gardens.—In a lecture on "Insect Enemies," recently delivered before the Vineland Horticultural Society, the usefulness of toads in gardens was forcibly pointed out. The lecturer advised his hearers to carry all the toads they could find into the garden, as they devour immense quantities of insects. A toad will swallow the largest specimen of a tomato-worm, although sometimes he will have a hard time of it.

Tobacco.—This plant plays a most important part in this country as to the habits of the people. "However used," says Dr. Robertson, "whether smoked, chewed, or used as snuff, its action on the system is but little different. It is essentially a narcotic, and as such it is detrimental to the power and healthiness of the nervous system—as such it stimulates at the expense of subsequent depression and eventual loss of tone; it interferes with the functions of assimilation and expenditure, and as such is injurious to the health of the system. Tobacco exerts more marked and injurious effects when chewed, less of these when smoked, and is least deleterious when used in the form of snuff. This is only, however, a question of degree; and in the temperate climes, the use of tobacco in any way can only be justifiable when, from poverty of diet and consequent vital depression, the effects of a habitually-used narcotic may not be undesirable."

Dr. Decaisne, in the course of investigations on the influence of tobacco on the circulation, has been struck with the large number of boys, aged from nine to fifteen years, who smoke; and has been led to inquire into the connection of this habit with the impairment of the general health. He has observed thirty-eight boys who more or less smoked. Of these, distinct symptoms were present in twenty-seven. In twenty-two there were various disorders of the circulation—*bruit de souffle* in the neck, palpitation, disorders of digestion, slowness of intellect, and a more or less marked taste for strong drinks. In three the pulse was intermittent; in eight there was found, on examination, more or less marked diminution of the red corpuscles; in twelve there was rather frequent epistaxis; ten had disturbed sleep; and four had slight ulcerations of the mouth, which disappeared on ceasing from the use of tobacco for some days.

No one can have any doubt upon the pernicious effect of smoking after reading the following warning by Dr. Prout, in his book on stomach diseases: "Tobacco is confessedly one of the most virulent poisons in nature. Yet such is the fascinating influence of this noxious weed that mankind resort to it in every form they can devise, to ensure its stupifying and pernicious agency. Tobacco not only disorders the assimilating functions in general, but particularly, as I believe,

the assimilation of the saccharine principle. I have never, indeed, been able to trace the development of oxalic acid to the use of tobacco; but that some analagous and equally poisonous principle (probably of an acid nature) is generated in certain individuals, by its abuse, is evident from their cachetic looks, and from the dark, and often greenish-yellow tint of the blood. The severe and peculiar dyspeptic symptoms sometimes produced by inveterate snuff-taking are well known; and I have more than once seen such cases terminate fatally with malignant disease of the stomach and liver. Great smokers also, especially those who employ short pipes and cigars, are said to be liable to cancerous affections of the lips." (See *Adulterations.*)

Toe-Nails, In-growing.—This most painful of the diseases of the nails is caused by the improper manner of cutting the nail—generally of the great toe, and then wearing a narrow, badly-made shoe. The nail beginning to grow too long, and rather wide at the corners, is often trimmed round the corner, which gives temporary relief. But then it begins to grow wider in the side where it was cut off; and, as the shoe presses against the corner, the nail cuts more and more into the raw flesh, which becomes tender and irritable. If this state continue long the toe becomes more painful and ulcerated, and fungus—proud flesh—sprouts up from the sorest points. Walking greatly increases the suffering, till positive rest becomes indispensable.

Treatment.—Begin the effort at cure by simple application to the tender part of a small quantity of perchloride of iron. It is kept at chemists in a fluid form, though sometimes in powder. There is immediately a moderate sensation of pain, constriction, or burning. In a few minutes the tender surface is felt to be dried up, tanned, mummified, and it ceases to be painful. The patient, who before could not put his foot to the floor, now finds that he can walk upon it without pain. By permitting the hardened, wood-like flesh to remain for two or three weeks, it can easily be removed by soaking the foot in warm water. A new and healthy structure is found, firm and solid below. If thereafter the nails be no more cut around the corners or sides, but always curved in across the front end, they will in future grow only straight forwards; and by wearing a shoe of reasonable good size and shape, all further trouble will be avoided.

Toffee, Everton, Recipes for Making.—Into a brass skillet put a quarter of a pound of fresh butter; as soon as it is just melted, add one pound of brown sugar; keep these stirred very gently over a clear fire, till a little of the mixture, dropped into cold water, breaks between the teeth without sticking to them. When it has boiled to this point, it must be poured out immediately, or it will burn. The grated rind of a lemon added when the toffee is half-done improves it; or else a teaspoonful of powdered ginger, moistened with a little of the other ingredients as soon as the sugar is dissolved, and then stirred to the whole. If dropped upon a buttered dish, the toffee can, when cold, be raised from it easily.

Another recipe for making this favourite sweetmeat is the following:—One pound of sugar, one pound of treacle, a quarter of a pound of butter, and five tablespoonfuls of good vinegar, all put into a saucepan and boiled over a brisk fire for a quarter of an hour, stirred quickly with a stick all the while. There should be at hand a vessel of cold water, and a little of the boiling mixture dropped in from time to time; if it is boiled enough, it will crisp immediately. Care must be taken that it does not boil too long, or it will acquire a burnt taste. The toffee, when cold, should be put in a tin can, and kept closely covered, exposure to the air causing it to liquefy.

Toilet.—See *Powder, Violet.*

Tomatoes.—This delicious wholesome vegetable is spoiled by the manner it is served up to the table. It is not one time in a hundred more than half-cooked; it is simply scalded and served as a sour porridge. It should be cooked three hours—it cannot be cooked in one. The fruit should be cut in halves, and the seeds scraped out. The mucilage of the pulp may be saved, if desired,

by straining out the seeds and adding it to the fruit, which should boil rapidly for an hour, and simmer three hours more, until the water is dissolved, and the contents of the saucepan a pulp of mucilaginous matter, which is much improved by putting in the pan, either before putting in the fruit, or while it is cooking, and ounce of butter and half an ounce of fat bacon, cut fine, to half a peck of tomatoes, and a small pepper-pod, with salt to suit the taste. The butter adds a pleasant flavour, and makes the dish actual food instead of a mere relish. The pan must be carefully watched, and but little fire used, and the mass stirred often to prevent burning towards the last, when the water is nearly all evaporated. The dish may be rendered still more attractive and rich, as food, by breaking in two or three eggs, and stirring vigorously, just enough to allow the eggs to become well cooked. Tomatoes, thoroughly cooked, may be put in tight cans and kept any length of time, or the pulp may be spread upon plates and dried in the sun or a slow oven, and kept as well as dried pumpkin, dried apples, peaches or pears, and will be found equally excellent in winter. For every-day use, a quantity sufficient for the use of the family for a week may be cooked at once, and afterwards eaten cold or warmed over. We beg of those who use this excellent food to try what cooking will do for it. It has been eaten half-cooked long enough. It never should be dished until dry enough to be taken from the dish to the plates with a fork instead of a spoon.

Tool Chests, Family.—Much inconvenience and considerable expense might be saved, if it was the general custom to keep in every home certain tools for the purpose of performing at home what are called small jobs, instead of being always obliged to send for a mechanic, and pay him for executing little things that, in most cases, could be sufficiently well done by a man or boy belonging to the family, provided that the proper instruments were at hand. The cost of these articles is very trifling, and the advantages of having them always in the house are far beyond the expense.

For instance, there should be an axe, a hatchet, a saw, a claw hammer, a mallet, two gimblets of different sizes, two screw-drivers, a chisel, a small plane, one or two jack-knives, a pair of large scissors or shears, and a carpet fork, or stretcher. Also an assortment of tacks, not forgetting cross-headed nails, some larger and some smaller. Screws, likewise, will be found very convenient, and hooks on which to hang things. The nails and screws should be kept in a wooden box, made with divisions to separate the various sorts, for it is very troublesome to have them mixed.

No home should be without chalk, glue, putty, common paint, cord, twine, and wrapping paper. And let care be taken to keep up the supply, lest it should run out unexpectedly, and the deficiency cause delay and inconvenience at a time when their use is most wanted.

It is well to have, somewhere in the lower part of the house, a deep, light closet, appropriated entirely to tools and things of equal utility, for executing promptly such little repairs as convenience may require, without the delay or expense of an artisan. This closet should have at least one large shelf, and that about three feet from the floor. Beneath this shelf may be a deep drawer, divided into two compartments. This drawer may contain cakes of glue, pieces of chalk, and balls of twine of different size and quality. There may be shelves at the side of the closet for glue-pots, paste-pots, pots of white, green, red, and black paint, cans of painting-oil, brushes, &c. Against the wall, above the large shelf, let the tools be suspended, or laid across nails or hooks of proper sizes to support them. This is much better than keeping them in a box, where they may be injured by rubbing against each other, and the hand may be hurt in feeling among them to find the thing wanted. But when hung up against the back wall of the closet, of course such tool can be seen at a glance.

We have been shown a simple and excellent contrivance for designating the exact places allotted to all these articles in a very complete tool closet. On the closet wall, directly under the large

nails that support the tools, is drawn with a small brush dipped in black paint or ink, an outline representation of the tool or instrument belonging to that particular place. For instance, under each saw is sketched the outline of that particular saw, and under the screw-drivers are slight drawings of screw-drivers, so that when bringing back any tool that has been taken away for use, the exact spot to which it belongs can be found in a moment; and all confusion in putting them up and finding them again is thus prevented. Wrapping paper may be piled on the floor under the large shelf. It can be bought very cheap by the ream at the wholesale stationers, and every well-regulated home should keep a supply of it in several varieties. Newspapers are unfit for wrapping-papers, as the printing-ink rubs off on the articles enclosed in them, and also soils the gloves of the person who carries the parcel.

Topaz.—The word topaz, according to Pliny, is derived from Topazos, an island in the Red Sea, but has no reference to the colour of the stone. It is also found in great variety and in countless numbers in various spots throughout New England, as well as in Wisconsin, California, and in most of the southern and middle Atlantic States of the Union.

Among the ancients this gem was highly valued for its medicinal qualities, principally as an antidote for mania, but also as a great strengthening medicine.

By the Greeks the topaz was supposed to mean that transparent stone of a gold yellow; by the Romans, of a transparent green-yellow.

Its colours are a clear straw, sulphur, wine, and gold yellow, sometimes with a tinge of violet blue, greenish, and white.

It is phosphorescent when heated, and becomes electric either by rubbing heated, or by pressure, and retains this property for twenty-four hours. Before the blowpipe it is covered with many small bubbles at a strong heat, and partially loses its colour. Acids have no effect on it.

There are eight different varieties of topaz principally sold. The first are known as water-drops; 2 is the Siberian topaz, white, with a bluish tinge; 3, Brazilian topaz, gold yellow, with a touch of red; 4, Saxon topaz, pale wine-colour; 5, Indian topaz, saffron-yellow; 6, Brazilian ruby, light rose-red; 7, Brazilian sapphire, light blue; 8, aquamarine, sea and emerald-green.

South America is the paradise of topazes. During the rainy season they are but little cared for. When it forms part of the primitive rock, it is wrought out by mining operations, as in Saxony. Electricity is the great test of a true topaz. Aquamarine, chrysolite, yellow quartz, and other yellow-coloured stones, are frequently substituted for topazes, but can all be detected by this unfailing test—that of rubbing. The hardness, fracture, and specific gravity of the topaz are also tests. By heat the topaz assumes a red or pink hue so nearly resembling the ruby, that, save for its electric property, it would be with the utmost difficulty distinguished.

Owing to the immense number of topazes yearly gathered in Brazil (about forty pounds) this stone is less valued now than formerly. The favourite ones are the rose-red, and the white, or water-drops.

Tavernier, the great traveller, speaks of a topaz formerly owned by the Great Mogul, of 157¾ carats weight, which was bought for 60,000 dollars.

Topsy-Turvy.—The expression *topsy-turvy* is derived from the way in which turf for fuel is placed to dry on its being cut; the surface of the ground is pared off with the heath growing on it, and the heath is turned downward, and left some days in that state, that the earth may get dry before it is carried away. It means, then, *top-side—turf-way*.

Tortoiseshell.—See *Ivory, Imitation of Carved.*

Toucans.—See *Parrots.*

Transfer Days.—See *Bank of England.*

Transfer-Paper.—See *Paper, Transparent.*

Transparent Cement.—The composition of this cement is, caoutchouc, fifteen grains; chloroform, two ounces; and mastic, half an ounce. The

two first-named ingredients are to be first mixed; after the gum is dissolved the mastic is added, and the whole allowed to macerate for a week. More of the caoutchouc may be applied where great elasticity is desirable. The advantages of this cement, for uniting broken glass, are very great.

Trees.—It would give additional interest to our country walks abroad if, while we stood in admiration of the trees that surrounded us, we knew something of their structure and histories. We will give a few brief particulars of trees, giving precedence to the "brave old oak."

The Oak.—A fine oak is one of the most stately and picturesque of trees; it conveys to the mind impressions of strength and duration which are very impressive. The oak stands up against the blast, and does not take, like other trees, a twisted form from the action of the winds. Except the cedar of Lebanon, no tree is so remarkable for the stoutness of its limbs; they do not exactly spring from the trunk, and thus it is sometimes difficult to know which is stem and which is branch.

Mr. Strutt observes: "Foremost in dignity and grandeur, the oak stands pre-eminent, and, like the lion amongst beasts, is the undoubted lord of the forest. Beauty, united with strength, characterises all its parts. The leaves, elegant in their outline, are strongly ribbed, and firmly attached to the spray, which, although thin and excursive, is yet bold and determined in its angles; whilst the abrupt and lustrous irregularity of its massive branches admirably contrasts with the general richness and density of its clustered foliage." The oak is a large, umbrageous, very handsome tree, with round, smooth, leafy, more or less wavy, horizontal branches; it has light green leaves on short stalks, oblong, and broadest towards the apex.

In the 6th chapter of Judges, we read that the angel of the Lord was seated under an oak, which was at Ophrah, when he appeared to Gideon. In the 24th chapter of Joshua it is written: "And Joshua wrote these words in the book of the law of God, and took a great stone, and set it up there under an oak that was by the sanctuary of the Lord," &c. Many other proofs from Holy Writ of the antiquity of this tree might be cited, but those we have given are sufficient..

We will now turn to the fabulous and legendary accounts given of it. The Arcadians, when rain is wanted, think they will obtain favour with Jupiter by casting branches of oak into a fountain belonging to his temple. The women of Priene, in matters of importance, used to swear by the "gloomy oak," because they had lost their fathers, husbands, and sons in a battle that was fought near an oak tree in the neighbourhood of Priene, a city of Ionia.

The crown of oak, which was less esteemed among the Greeks than one of gold, was considered by the Romans as a most desirable recompense. A citizen of Rome only could obtain it, and he must have killed an enemy, gained a victory, and saved the life of a Roman. Amongst the Celts the tree was worshipped, and considered as the emblem of hospitality, a virtue highly respected amongst them. In heraldry the oak is the true emblem of strength and power.

Charles the Second, of England, after the battle of Worcester, in the year 1651, whilst fugitive, was kindly received at Boscobel House, situated on the borders of Staffordshire. This solitary dwelling was inhabited by five brothers of the name of Pendrill, who hid the king in a garret, which, being matted, prevented any suspicion of a little cavity over the staircase where he was concealed. His bed was artfully placed behind some wainscot, and shut up very closely.

Charles, being dressed in clothes belonging to the Pendrills, was afterwards led into the neighbouring wood, and while they pretended to employ themselves in cutting wood, he mounted upon an oak, where he sheltered himself among the leaves and branches for twenty-four hours. The tree was afterwards denominated the "Royal Oak," and was enclosed with a brick wall, surrounded by by laurels, which were planted to commemorate that event. When Charles was restored to the throne in 1660, he

visited the house in which he had been so kindly received, and the oak which had so providentially sheltered him.

The acorn, fruit of the oak, is good food for pigs and fallow deer; they also serve to fatten poultry. The mistletoe is one of those plants which draw their nourishment from some other plant. It generally grows on the apple-tree, sometimes on the oak. The bark, the sap, the leaves, and the fruit of this tree are all useful, either in arts or medicine.

The Sycamore, or Plane Tree.—The sycamore, too, is mentioned in the Bible. On the day our Lord made his solemn entry into Jerusalem, little Zaccheus, chief among the publicans, mounted up into a sycamore tree to see Jesus pass by. But the Scripture sycamore is not the same as those which grow in this country, which are a kind of maple. The Egyptian sycamore partakes of two natures, the fig-tree in its fruit, and the mulberry-tree in its leaves. This fruit sticks to the trunk of the trees, and its taste is like a wild fig; but, according to Pliny and other naturalists, it does not ripen till it is rubbed with iron combs, after which process it is fit to eat in four days. Ordinary houses were built with this tree in Palestine. They "changed sycamores into cedars" was a proverbial expression for an improved condition of society, as indicated by superior buildings. The sycamore not only grows to a large size, but lives to a great age. The wood of this tree is much employed in turnery.

The Poplar.—There are three principal species of the poplar: the white, the black, and the trembling poplar. The white poplar grows upwards of ninety feet; its body is straight, and covered with white bark. The ancients consecrated this beautiful tree to Time, because its leaves, white on one side and brown on the other, and continually in movement, were considered by them as expressive of day and night. Fable ascribes a whimsical origin to the two-coloured leaves of the white poplar. Hercules, who was called the god of strength, distinguished himself by the performance of the twelve labours assigned to him by Fate. One of the acts of subjection required was, to bring up to the face of the sun, Cerberus, the triple-headed dog that guarded the entrance of hell. Hercules descended into the lower regions, wearing a crown of poplar. The inward part of the leaves next to his head preserved their original white colour, whilst those leaves which were outside became blackened by the smoke of that infernal place.

The black poplar is the emblem of courage, and is consecrated to Hercules. The odoriferous buds of this tree are put into composing balsams; but none of them have so delightful a perfume as that species with oval leaves, called the balm-tree. The leaves of the black poplar are said to ease gouty pains, when bruised and applied to the part affected. A sort of wax may be extracted from the poplar buds.

All poplars grow rapidly, and rise to a great height, but narrow in mass, so as to be very conspicuous in hedgerows and landscapes.

The Willow.—This is a very graceful and beautiful tree.

"Emblem of sorrow, 'neath thy drooping bough
The child of grief shall breathe the sacred vow,
Unseen, unheeded, shed the silent tear,
And mourn the loss of friend or parent dear.
Yes, for though passing time may soften grief,
And life's succeeding changes bring relief,
Yet still remembrance shall return to thee,
And bless thy friendly shade, sweet willow tree."

The pliable sort of willow is called osier, and is chiefly used for basket-making. Hollow willows have been known to be nine feet in diameter—that is, twenty-seven feet in circumference. The leaves and buds of the willow are used as astringents. The flowers of several sorts of willows have an agreeable scent; from the Persian willow may be distilled a water delightfully fragrant.

The most beautiful weeping willows in England are those two in Pope's garden at Twickenham, near London. They are remarkable for their bulk and the extent of their branches, which are so spreading that they form two large groves.

"No tree in all the grove but has its charms,
Though each its hue peculiar; paler some,
And of a warmish hue—the willow such."

The Lime Tree.—The lime, or linden, was considered by the ancients as the emblem of conjugal affection. The lime tree is not only beautiful, but very useful. An infusion of its flowers is considered good for spasmodic affections. Its timber is used by carvers, because it is a soft, light wood, and also by architects, for forming the models of their buildings. The lime sometimes acquires a vast height and enormous bulk, even to that of thirty feet and forty-eight feet in circumference, that is, sixteen feet in diameter. Sir Thomas Brown mentions a lime tree in Norfolk, sixteen yards in circuit a foot and a half above ground; its height, thirty yards; and, in the least part of the trunk, it was eight yards and a half.

This leafy tree is grown chiefly for ornament, and is very suitable for avenues. They are seldom or never introduced into the forest.

The Laurel, or Bay Tree.—The custom of crowning heroes and scholars with the leaves of the bay, or laurel, is well known to every reader of ancient history. It is likewise used as the emblem of clemency, which virtue is personified and represented on antique medals, under the figure of a female holding a pike and a sprig of laurel. This tree is sacred to Apollo. The laurel tribe contain essential oil in abundance, which imparts to them a peculiarly sweet, though strong, penetrating odour; they also yield some of our most grateful stimulants and spices. Cinnamon, cassia, camphor, benzoin, and sassafras, are products of the family. The roots of the sweet bay yield a violet dye; and a concrete oil, used in candle-manufacture, is obtained from the fruit of *Laurus glauca.*

The Cypress.—The common cypress is a tall, spreading tree, originally from the eastern countries. Its dark foliage, impenetrable to the rays of the sun, rises in a pyramidal form towards the sky. It was considered by the ancients as a melancholy and funereal tree, sacred to the Fates, the Furies, and Pluto. They planted it inside their graves, a custom still preserved in the eastern countries.

The cypress tree was, by Phocion, the celebrated Athenian general, compared to a young man who spoke with more vanity than judgment: "Your discourse, young man, resembles the cypress trees: they are large and lofty, but produce not fruit." The wood of the cypress is said to be incorruptible. The gates of St. Peter's, at Rome, were originally made of this wood.

Pines.—These trees very much resemble fir trees. They are resinous, and of extreme utility. There are several species, which supply both liquid and dry resin, pitch, tar, and grease. The yellow resin, which is extracted from the pine, serves for candles, by melting it on a wick. In Canada, one large pine, hollowed out, serves for a pirogue, or large Indian boat.

Lord Weymouth was the first proprietor who planted this tree extensively in Britain. It accommodates itself to most kinds of soils, but attains greatest perfection in valleys, and on river banks, where there is an accumulation of vegetable matter. So situated it attains a height of from one hundred and fifty to two hundred feet, with a girth of stem of from twelve to fifteen feet. The pine produces a whitish-yellow wood, which is pretty hard, fine grained, and easily worked; and being usually straight, this timber is much used for masts, bowsprits, &c.

The Elm Tree.—The elm lifts its branches almost perpendicularly; the sprigs are very fine; and when deprived of its foliage, the beautiful ramification of this tree resembles a delicate pencil or Indian-ink drawing. Elm trees have been known, in England, to measure thirteen feet in diameter.

The ancients usually planted this tree round their graves. The poet Gray, in his elegy, mentions the elm:—

"Beneath those rugged elms, that yew-tree's shade,
Where heaves the turf in many a mould'ring heap,
Each in his narrow cell for ever laid,
The rude forefathers of the hamlet sleep."

The elm is a lofty tree, valuable both for its use in the arts and its ornamental appearance. This tree is not a forester, never being seen but about dwellings, or where dwelling-houses have formerly

stood. The leaves of this tree are excellent food, in winter, for sheep, goats, and oxen; but its blossoms are as injurious to bees as its seeds are to birds. The wood of this tree is much prized by joiners for its fine grain, and the mahogany colour which it readily assumes on the application of an acid. It is also used for a great variety of purposes by wheelwrights, machine makers, and ship and boat builders. It may be known by its serrated leaves, unequal in their two sides, and small flowers, growing in clusters, appearing before the leaves. The fruit is a samara, or compressed, one-seeded little nut, winged all round. The seeds of the elm are eagerly eaten by pigeons and common poultry. The elm is one of the principal timber trees of Britain, most extensively planted, and a chief ornament of English scenery.

The Yew Tree.—This tree is the emblem of sorrow, and its leaves and berries are reputed poisonous, though in this country their narcotic property is less dangerous. The ancient Britons, famous for their superior skill in archery, before the invention of gunpowder, made the archers' bows of yew.

"When the rude natives of our polish'd land
Form'd the strong phalanx of their valiant band;
With dext'rous hand the bended bow they drew,
And shap'd their arrows from the dusky yew."

This tree is more frequently grown as an ornamental than a forest tree, and, like the cedar, it forms a plant suitable to places consecrated to solemn feeling. As an ornamental tree, it should be fenced round, or otherwise placed beyond the reach of cattle, as its foliage is highly poisonous, and being evergreen, is very apt to be browsed upon during the winter.

Yews are believed to be the most ancient planted trees of Great Britain; and no doubt can exist that there are some of the species, in England, as old as the introduction of Christianity, and, there is every reason to believe, very much older. The yew attains the greatest age amongst trees. The yew of Brabourn churchyard, in Kent, is said to have attained the age of 3,000 years; that, however, at Hedsor, in Bucks, surpasses all others in magnitude and antiquity, measuring above twenty-seven feet in diameter, thus indicating the enormous age of 3,240 years!

The Chestnut Tree.—The chestnut may be ranked as one of the finest trees we have. It is common in parks and pleasure grounds, where the elegance of its pyramidal form, and the beauty of its flowers and foliage, make it a general favourite. It is a spreading tree, of great size and longevity. The horse-chestnut is only valued for the beauty of its flowers and the majesty of the full-grown tree in park scenery. The timber is very inferior. At Fortworth, in Gloucestershire, is a tree called "The Great Chestnut of Fortworth." It measures fifty-two feet round, and is said to be 1,100 years old. In many parts of Kent the remains of very old decayed chestnut trees may be seen.

One of the most celebrated trees in the world is the chestnut tree of Mount Etna, Castayno de Cento Cavalli (the Chestnut Tree of a Hundred Horses), so named because Jane, Queen of Arragon, on her voyage from Spain to Naples, landed in Sicily for the purpose of visiting Mount Etna. She was accompanied by one hundred attendants on horseback, who, with her, found shelter within the trunk of this enormous tree during a storm. Whether this anecdote is founded on truth or not, we cannot say, but it is certain that the astonishing bulk of the tree is beyond all precedent, being in circumference 163 feet. Though the heart of the trunk is decayed, and a public road leads through it wide enough to admit two carriages abreast, yet the tree is still adorned with rich foliage, and much small fruit, which is gathered and preserved by persons who inhabit a small hut built in the cavity of the tree. It is impossible to ascertain how many years this marvellous tree has been in existence, because the concentric rings of annual growth are so decayed that they cannot be enumerated, which is the usual method of ascertaining the age of trees. Naturalists suppose it to be some thousand years old.

The Ivy.—The ivy bears, amongst the

poets, a very uncertain reputation. Some consider it as the symbol of a generous and faithful friendship, and have adopted the device of an ivy leaf with these words: "I die where I am attached:" because the ivy never leaves the tree to which it clings. Others have a less favourable opinion of its good qualities; they indeed allow that it never deserts the object of its choice, but affirm that it draws its subsistence from the tree that supports it, and by this means impoverishes its protector.

The ivy, in its infant state, neither produces flowers nor fruit. Its leaves in this state are called lanceolated. When the leaves are become quinlated, the plant adheres to rocks and trees for support. After three years, its leaves become trelobed, and it branches out into a tree, producing both flowers and fruit. Its leaves are used in medicine, and are considered good nourishment, in winter, for lean cattle. It is said that if silkworms feed on mulberry leaves picked from trees near ivy, they will not long survive their repast.

The common ivy is a well-known native of Britain, and of most parts of Europe, although it is more rare in the northern countries. Its long, creeping, branched stem, climbing on trees and walls to a great height, and closely adhering even to very hard substances, by means of rootlets, which it throws out in great abundance along its whole length, acquires in very aged plants almost the thickness of a small tree. Its five-lobed, shining, stalked, evergreen leaves, clothing bare walls with green luxuriance, serve to throw off rain, whilst the rootlets of the stem suck out the moisture, so as to render damp walls dry, contrary to a common prejudice, that ivy tends to produce dampness in walls. It injures trees, however, both by abstracting sap and by the constriction caused by its insinuating embraces.

The Beech.—This tree may be considered as a formidable rival to the oak, both from the beauty and majesty of its appearance and the utility of its wood. The shade of the beech tree is said to be salubrious to human bodies, but injurious to plants:—

"There, at the foot of yonder nodding beech,
That wreathes its old fantastic roots so high,
His listless length at noontide would he stretch,
And pore upon the brook that babbles by."

The beech is a native forest tree, occurring most commonly on the chalky districts of the kingdom. When full-grown it is a stately tree, and its timber is convertible into many kinds of domestic articles, very durable when polished by the cabinet-maker, and equally so if kept constantly under water. A tree blown down at Newbattle Abbey, the seat of the Marquis of Lothian, contained upwards of 1,000 measurable feet of timber—twenty loads, or twenty-five tons.

The Ash.—The ash, in ancient times, was reckoned the best wood that could be used for the lances of the knights. It is a most beautiful and umbrageous tree, highly ornamental in parks. It rises to the height of about 130 feet, generally with a smooth stem. The wood is white, tough, and hard, much valued by wheelwrights, cartwrights, coachmakers, joiners, and turners. It is also excellent wood for fuel. It is an undoubted native of Britain. The flowers are quite naked; the leaves have five or six pairs of leaflets. The flowers appear before the leaves in spring, and the tree is not covered with leaves until the season is far advanced, losing them again early in autumn. There are in Europe and North America about fifty species of the ash.

Caoutchouc Tree.—India-rubber is the produce of this tree, not indeed growing in the shape of dark-coloured bottles, but flowing (in consequence of an incision mode in the bark) in a liquid state from the trunk of the tree. This gum or bituminous matter, is as white as milk, and is received into vessels placed expressly for the purpose. Before the liquor has time to coagulate, small earthern bottles are dipped into it a sufficient number of times to form the thickness required. These are then hung over smoke, which completely dries them, and gives them a dark colour. Before they are entirely dry, a knife is drawn across them, which produces the lines observed upon them.

The caoutchouc tree is a native of Brazil, and grows from fifty to sixty feet high; the bark of the tree is prickly, or scaly, like the pine-apple, and wholly bare of branches, which grow, some straight, and some bent in different directions. At the very top of the tree, at the extremity of the branches, are the leaves, which are very thick, like leather, and their upper and under surfaces present different tints.

The Cotton Tree.—This tree is a native of India, Arabia, and Egypt. If left, without being pruned, to grow to its full height, it sometimes attains to fifteen or twenty feet. The leaves grow upon long hairy foot-stalks, and are divided into five pear-shaped lobes. The seed-vessels, or cotton pods, contain a soft vegetable down, which envelopes the seeds.

The process of separating the cotton from the seed is a very long and troublesome operation, particularly when performed by the hand; the use of the machine called a gin very much facilitates the process. When gathered up, it is forced into bags by means of screws; each bag, when filled, weighing about three hundred pounds. These are then sewed up and sent to the place of shipment, where they are again pressed, and reduced to half their original size. From thence they are imported to England, where they undergo the process of carding, spinning, and weaving.

The Ebony Tree.—In the East and West Indies is the home of this tree. There are three species of it: the black is the most valuable; the green is of a blackish cast, of which the Indians make the statues of their gods, and the sceptres for their kings; the red ebony, little known to us (called the Grenodilla), is of a brown red.

Of the tree that yields the black ebony authors and travellers give very different accounts. Mr. Flacourt, who was Governor of Madagascar for many years, assures us that it grows very high and bulky, and that its leaves resemble the myrtle, of a deep, dusky, green colour. Ebony wood is very hard and heavy, susceptible of a very fine polish, and for that reason is used in mosaic and inlaid works, &c.

The tree that yields green ebony is very bushy; its leaves are smooth, and of a fine green colour. Beneath its bark is a white skin, about two inches thick; all beneath which, to the very heart, is a deep green colour. It is used both in mosaic work, and dyeing, as it yields a fine green tincture. Red ebony we know but by name.

Lotos Tree.—Of the lotos, or lote plant, or lote tree, there are four species. In this country they do not produce fruit, but in Spain and Italy this fruit is preserved as dry sweetmeats, and is about the size of a plum. In India it resembles a small olive in size and shape. The wood of the lotos is used to make wind instruments. Its root is proper for hafts of knives, and was highly esteemed by the Romans for its beauty and use.

Naturalists are uncertain whether the celebrated lotos, spoken of by ancient authors was a herb, a root, or a tree. Some suppose it to be a species of the water-lily; others are of opinion that it was the mecocauher; others that it was the rhamnus lotos, a species of wild jujube tree. Herodotus informs us that when the river Nile overflows, the Egyptian lotos grows in great abundance along its banks, and that it is like a lily. It is held in great veneration, dried in the sun, and baked as bread. Another represents it as a little rough, thorny treee, producing fruit of which wine is made, and affirms that the roots and seeds only were used for making bread.

Pope expresses his belief that it was this kind of lotos which produced the fruit that overcame Ulysses and his companions. The inhabitants of Lybia, who chiefly subsist on the lotos, are called Lotophagi. The Greeks speak of the fruit of the tree as being so delicious, that strangers, after having tasted it, lost all inclination to return to their native country, and they settled among the Lotophagi.

The trees around them all their food produce,
Lotus, the name divine, nectarious juice!
(Thence called Lotophagi), which whoso tastes,
Insatiate riots in the sweet repasts;
Nor other home, nor other care intends,
But quits his home, his country, and his friends.

The Chinese divinity, Puzza, is seated on a lotos, or sun-flower, and the Japanese God is represented sitting on a water-lily. The flatterers of Adrian, Emperor of Rome, after the death of his favourite Antinous, endeavoured to persuade him that the young man was metamorphosed into a lotos, or sun-flower; but the emperor created a temple to his memory, and wished it to be believed that he had been changed into a constellation.

The Myrrh Tree.—Of this tree that produces myrrh, little is ascertained; because travellers are not agreed as to what tree the gum issues from; they all say the tree is small and thorny, but they disagree as to the form of the leaves.

Myrrh is a kind of resinous gum, issuing by incision, and sometimes spontaneously, from the trunk and larger branches of a tree growing in Arabia, Egypt, and especially in Abyssinia. To obtain the best myrrh, it is necessary that the tree be young and vigorous, and the bark without any moss or parasitic plant; the savages strike the tree with an axe above the first large branches.

The myrrh which flows through the first year's wound is the best. The incisions are made twice a-year, and the myrrh oozing out is received on rush mats disposed underneath. The ancients distinguished two sorts of myrrh: the liquid, which they named *stacle;* the other solid, which they called *troglodyte* myrrh.

Modern travellers affirm they never have seen myrrh in a liquid state, and that it is said by the natives to harden on the tree as soon as it is exposed to the air.

The druggists sell two kinds: the myrrh in tears, called *stretc*, and the ungulate, or in nails, so called from the white spots, like those on finger nails, observed upon it.

We learn in Scripture, that myrrh was one of the tributes offered to Jesus Christ by the Magi, and that His body was embalmed with costly perfume made of myrrh by Nicodemus. Wine, made of myrrh, was offered to him, as was the custom when any person suffered great bodily torment, in order to deaden their faculties.

You have heard of the phœnix, a fabulous bird, held in great veneration by the Egyptians. The inhabitants of Heliopolis, a city of Lower Egypt, pretended that every five hundred years this bird brought his dead father from Arabia, having first wrapped him up in a little coffin, made of myrrh, in the shape of an egg, which he deposited in the Temple of the Sun.

Naturalists describe the bird as very beautiful; its head finely adorned with plumage, its neck covered with gold-coloured feathers, its body purple, and its tail white, intermixed with carnation, with eyes as brilliant as stars. After a life of five or six hundred years spent in the wilderness, it collects a quantity of sweet wood and aromatic gums; with these it erects a funeral pile, which it fires with the wafting of its wings, and expires itself amidst the odoriferous flames. From its ashes arises a worm which in time becomes a phœnix. This bird is spoken of as being single, or without a companion, only one being in existence throughout the whole world at the same time.

The Muchineal Tree.—This tree is a native of America; its shade is said to be fatal. Its fruit and leaves are poisonous, as well as the juice of the body of the tree. A traveller, who is reported to have reposed under its branches, received some drops of the dew from it on his face, which immediately blistered, and left pits like the small-pox; but it is not said that he died, so we may conclude that unless the leaves are broken, and the poisonous juice likely to spill, no fatal effects need be apprehended. The juice is used by the natives to poison their arrows.

The fruit of this tree is very beautiful, of the size and colour of the golden pippin. The tree grows to the size of an oak. Before it is felled, fires are made round it, to dry the milky caustic juice, with which it abounds. If this precaution was not observed, they would be in danger of losing their sight by the juice falling into their eyes. Its sawdust is equally dangerous, therefore the workmen generally cover their faces with fine lawn. This tree grows nowhere but on the sea-shore.

Trees, Metallic.—The lead tree is produced as follows:—Put into a glass bottle about half an ounce of sugar of lead, and fill up to the neck with distilled or rain-water; then fasten to the cork or stopper, a piece of zinc wire, so that it may hang in the centre; then place the bottle where it may remain undisturbed. The wire will soon be crusted with crystals of lead, precipitated from the solution, and assuming a tree-like form very pleasing to the eye.

For the *tin tree*, proceed as before, and put in three drachms of muriate of tin, and about ten drops of nitric acid. The tin tree has a more lustrous appearance than the lead tree.

The *silver tree* is prepared by a solution of four drachms of nitrate of silver, in distilled or rain-water as before; to which add about an ounce of quick-silver.

Trees, To Grow in Parlours.—If an acorn be suspended by a piece of thread within half an inch of the surface of some water contained in a hyacinth-glass, and so permitted to remain without being disturbed, it will, in a few months, burst and throw a root into the water, and shoot upwards its straight and tapering stem, with beautiful little green leaves. A young oak-tree growing in this way on the mantel-shelf of a room is a very elegant and interesting object. We have seen several oak-trees, and also a chestnut-tree, thus growing; but all of them, however, have died after a few months—probably owing to the water not being changed sufficiently often to afford them the necessary quantity of nourishment for the matter contained in them.

Trees, To Protect from Mice.—The use of coal-tar is not to be recommended to keep mice from destroying fruit-trees during the winter season. A better method is the following:—Take sheet or tea-chest lead (which can be bought for a nominal price), and cut it into strips eight inches wide and sufficiently long the other way to go round the tree once and a half or twice; then wrap it round the tree lightly, and it will stay without any further trouble. It can be taken off in the spring, and laid away in a place free from damp, for use in subsequent years. This method is always successful.

Trifles.—There is nothing on the earth so small that it may not produce some good; nothing so insignificant that it will not bring forth one beautiful flower; no pearl so little that it will not sparkle if brought to the light.

All nature sprang from a seed. The majestic oak was once a slender twig, and the grains of sand upon the sea-shore are valueless if taken separate. But the sand forms a footing from which to view the mighty ocean, and vast as that ocean is, 'tis but drops have made it vast.

The petty trials, the small thorns, are more difficult to overcome, worse to pluck out, than those greater obstacles we encounter.

So with character. Those little tiny faults and errors that so harass the soul must be overcome before excellence can hope to be gained. Small as they are, they keep us from the right path, and from leading a virtuous life. Day after day we yield to the same temptations—hasty words spoken that fall on the heart like coals of fire; trifles—but what do they amount to? Another's life, perhaps, made miserable. A kind word! What influence it has! it lets in a ray of sunshine to a saddened heart. A word of encouragement spoken in due time may save years of trouble. What opportunities, then, have we of making others happy; for it lies in the power of all—not one is deprived of the great privilege.

Troco, or Lawn Billiards.—This game is somewhat similar to, though scarcely so amusing as croquet (which *see*). It is played by any number of ladies and gentlemen, and the object is to pass a wooden ball through an iron ring, fixed on a movable pivot in the centre of a circle, round which the players take their places. The ball is lifted from the ground by means of a cue furnished with an iron ring at the end, and propelled, or thrown forward, by a simple movement of the arm. As it is the object of the player to pass his own ball through the ring, it is equally the object of his opponent to prevent him.

This he accomplishes by means of a roquet, or canon. The game is generally played fifty up: *one* point being counted for a simple roquet; *two* for making, or passing through the ring; and *three* for roqueting and making the ring at the same stroke.

Trout.—The trout is considered one of the finest river fish that this country can produce. Its colours are beautifully varied at different seasons of the year, and according to the rivers it frequents. They abound in the generality of our streams, rivers, and lakes, and are usually angled for with an artificial fly. Their weight also differs from half a pound to three; some few have been caught which weighed upwards of four pounds. Trout are extremely voracious; and, by their activity and eagerness, afford famous diversion to the angler. Previous to their spawning, they are observed to force a passage through weirs and flood-gates against the stream. Their general time of shedding their spawn is about October or November; in some rivers, however, it is much sooner, in others later. They are also met with in eddies, where they remain concealed from observation behind a stone, or log, or a bank that projects into the stream; during the latter part of the summer, they are frequently caught in a mill-tail, and sometimes under the hollow of a bank or the roots of a tree. In angling for trout, there are many things worthy of particular observation: 1st. That the day on which the sport is undertaken be a little windy, or partially overcast, and the south wind is superior to all others, if it do not too much disturb your tackle. 2nd. The sportsman should remain as far as possible from the stream, fish it downwards, the line never touching the water, as the agitation proceeding from the fall might disturb the fish, and preclude all possibility of capturing them. 3rd. Clear streams are famous for sport, and in fishing in them, a small fly with slender wings must be attached to the hook. When the water is thick, and the sight more imperfect from this advantage, a larger species of bait must of necessity be used. 4th. The line should, on an average, be about twice as long as the rod, unless in cases of emergency, when the number and variety of trees exclude the probability of a successful throw, if at any distance. 5th. Let the fly be made to suit the season. After a shower, when the water becomes of a brown appearance, the most killing bait is the orange fly; on a clear day, the light-coloured fly; and on a gloomy day, in overshadowed streams, a dark fly.

Very large trout have been killed in Ullswater, in Cumberland, and still larger in Loch Awe, in Argyleshire. They are said to be by far the most powerful of our fresh-water fishes, exceeding the salmon in actual strength, though not in activity. The most general size caught by trolling ranges from three to fifteen pounds; beyond that weight they are of uncommon occurrence. If hooked upon tackle of moderate strength, they afford excellent sport; but the general method of fishing for them is almost as well adapted for catching sharks as trout; the angler being apparently more anxious to have it in his power to state that he had caught a fish of such a size, than to enjoy the pleasure of the sport itself. However, to the credit of both parties, it may be stated that the very strongest tackle is sometimes snapped in two by the trout's first tremendous springs. The ordinary method of fishing for this king of trouts is with a powerful rod, from a boat rowing at the rate of from three to four miles an hour; the lure, a common trout, from three to ten inches in length, baited upon six or eight salmon hooks, tied back to back upon strong gimp, assisted by two swivels, and the wheel-line strong whip-cord.

Troy Weight.—

24 grains (*gr.*)	make	1 pennyweight	*dwt.*
20 pennyweights	,,	1 ounce	*oz.*
12 ounces	,,	1 pound	*lb.*

This weight is used for weighing gold, silver, and precious stones.

Truffles.—The truffle is very freely used in French cookery. The root appears to be indigenous to France, whence it is exported to all parts of Europe. Professor Clos describes the root as partaking of the botanical and chemical

properties of the mushroom tribe. The soil in which that root thrives best, and is found in considerable quantity, is ordinarily of a dry character, sandy or clayey; and it is found near some of the forest trees — the oak, the birch, and the elm.

It is allowed that the very best truffles are found at Perigord, in the department of the Dordogne, whose perfume and fine flavour are said to be unparalleled. The blacker the root is in colour, the more highly it is prized by epicures and gourmands.

Amid the varieties of this singular production of nature there seems to be uniformity in its growth. It takes a whole year to bring the roots to a state of maturity; they are found about four inches below the surface of the soil. The spot where a truffle-bed exists is generally known by the hollow sound which the ground emits on being tested, and on which frequently a swarm of large bottle-flies settles, being attracted by the scent of the root. It is a singular fact that all vegetation—all kinds of plants, flowers, and even the grass—is affected by a sort of blight in the immediate vicinity of a truffle-bed. Pliny tells us that in his days the peasants who searched for truffles, to gratify the taste of the Roman aristocracy, were always accompanied by a swine, whose keen scent soon directed them to the hidden treasure.* In our days dogs of the spaniel breed, trained for the purpose, are used in searching for the underground vegetable. In those districts of France where the deposits are most extensive and prolific, numerous packs of dogs are kept by the peasantry, which are constantly employed in gathering the crop of truffles, if we may use this expression.

Truffles are very nourishing, and are said to be strong stimulants. They are often eaten, peeled, raw, thinly sliced, and then soaked in wine, or only roasted in ashes. They are often used as an addition and seasoning to meat pies, sauces, and ragouts, and a favourite dish is made of them nearly alone.

The flesh of truffles is solid, partly juicy, and partly dry, like the kernel of many fruits of trees. Before it is ripe the truffle has no other smell than that of the mouldiness of fertile earth or decayed vegetables; but as it approaches to ripeness, it attains the truffle smell so agreeable to epicures, which at first is fragrant, and often like musk.

We should be glad to see this esculent more cultivated among horticulturists. That it may be cultivated with some success there is but little doubt; but this can only be done by taking the truffle from where it is found growing, and laying it in a somewhat similar situation.

Tulips, Cultivation of.—These flowers, on coming through the ground, generally crack the surface all over the bed, for the rains have closed the compost at the top until the spikes break it. The whole of the surface should be stirred, and any lumps bruised, so that it may be laid pretty even. It is of the greatest benefit to the bulbs to give them air, and of infinite service to the stems, to lay the soil pretty close to them.

In some kinds of loam, from the swelling of the bulb and the progress of the spike through the earth, it will be actually cracked, so as to almost show the bulb, which would thus be exposed to all the vicissitudes of the weather and the attacks of insects which could not find their way through crumbled earth, lying close, though lightly, on the bulb and round the stem.

If any vacancies occur where the plant has not come up while the main quantity has, it will be necessary to search carefully for the cause. Sometimes a stone or a hard lump of dirt will have turned the spike downwards or sideways for a considerable distance, and thus thrown it behind; besides which, it may so far impede its progress as to throw it a long way out of its place before it can grow up at all. The removal in time will relieve it so as to make the delay of small consequence. It may be, however, that the plant is affected; the outer leaf may have begun to rot, or, as is sometimes the case, may have so completely closed over the other as to prevent its growth, and even cause it, if neglected, to decay instead of grow. The decayed part must, in such cases, be entirely removed

with a sharp knife, and the plant be laid bare down to the bulb. It should then be covered a few days with a bell-glass, and as it progresses, the hole filled up with fresh loam, for by no means ought the same to be returned to the place, and all the portions of the rotted leaf or leaves should be thrown away from the bed.

The covering at nights and not uncovering by day, if there be frost, must be always observed. Should the weather be mild towards the end of the month, and there be refreshing warm rains, it will be of service to let the tulips have them; but be doubly careful that the frost does not reach them afterwards, or there will be mischief.

It has been preached by the old florists that tulips should not be watered. This is perfectly erroneous; it is true they do not want much, but look at the strength the foliage acquires by a warm shower, and then ask yourself why, in the absence of rain for any continuance, water should not be beneficial. It is all a mistaken notion, and arises from this fact—the roots will go down after moisture, and the foliage will therefore never, or at least rarely, flag, even in a long drought; but the foliage requires moisture as much as the root, and though it would matter but little whether a drop of rain ever reached the roots from above, or a drop of water ever went below the surface, the foliage ought not to go without moisture. There is no plant in the botanical world that derives more benefit from a gentle shower than the tulip; and when, as is often the case, it can get none for a considerable period, none derives more benefit from a gentle watering all over the foliage, but not in such quantity as to penetrate the earth much, for that is immaterial. It should, however, be soft river or pond water, or rain water that is used; and though it may seem trifling, if, on plunging a thermometer into it, there appears many degrees' difference in the heat, a little warm water, to raise the temperature to that of the air, or a trifle above it, will be of infinite service.

Turkey Rhubarb.—See *Rhubarb, Turkey.*

Turnips.—It is rather singular, but the turnip was known many years in this country before it was introduced as a culinary vegetable. Turnips are sometimes liable, in weak stomachs, to produce flatulency, and to prove difficult of digestion. They are often used medicinally in coughs, hoarseness, and other disorders of a similar nature. The syrup of turnips, after being extracted by baking, and mixed with honey, has the same beneficial effect. At table they are generally served with boiled meat, for which purpose middle-sized turnips are better than large ones: as the latter, being of a spongy nature, contain a greater quantity of water than those of a smaller size. There is an agreeable dish made of mashed turnips, by first straining out the water, and then mixing them up with some thin melted butter, serving them up to table as for roast ducks. They are most useful in stews and broths, and make one of our best white soups.

Turpentine.—This is an exudation from different species of pines. Common turpentine is the fluid resinous exudation from the Scotch fir and others of the pine tribe. From this the volatile oil of turpentine is obtained, by distillation; the dry substance which remains constitutes rosin. Oil of turpentine is a valuable remedy, either externally or internally. In the former case, if applied to the skin by means of cloths soaked in it, it is a powerful counter-irritant, acting like mustard, and sometimes even blistering. It is often employed for purposes of counter-irritation in inflammatory diseases in the abdomen. When thus used, it should be warmed, by placing the pot or bottle containing the turpentine in hot water. In rheumatic affections, lumbago, sciatica, &c., turpentine is a valuable addition to liniments. One part to two of the ordinary soap liniment may be used. As an external application in burns, turpentine has been much used.

Twenty-One Questions, The Game of.—The origin of this game may be said to be lost in the mists of antiquity. It was a favourite pastime with the celebrated Canning, and thence became a popular parlour game. In the

strict game no question is fair that may not be answered by plain "Yes" or "No." The best way of playing this game, which any number of persons may engage in, is to confine the selection to the proper names of persons of celebrity. The range of choice is very great, and the practice of the game becomes a most valuable exercise of historical or contemporary knowledge, both for the questioner and the answerer; for the latter must take care not to select the name of a person with whose history and circumstances he is not perfectly well acquainted.

As we said before, the game may be played by any number of persons; but as there is only to be one questioner, there had better be only one answerer, who shall be appointed by the rest of the company to answer for them. The advantage of this is evident; for, in order that the game may be a fair test of the questioner's knowledge and skill in the art of putting questions, it is desirable that he should be answered by some one equally skilful with himself, and who is sufficiently well acquainted with the facts to deliver his answer without hesitation.

To convey some idea of the manner in which names can be elicited by questions answerable by "Yes" or "No," we give an example:—

1. Is it the name of a man?—*Yes.*

2. Is he now alive?—*No.*

3. Was he a native of these islands?—*Yes.*

4. Did he live in the present century?—*No.*

5. Did he live in the eighteenth century?—*No.*

6. Did he live in the seventeenth century?—*Yes.*

In fixing the time, if the period is carried back beyond the seventeenth century, it is generally desirable to take a good leap back, and ask if it was before the Conquest. The number of names popularly known as belonging to the period between the Conquest and the end of the sixteenth century is comparatively small. Here, however, we have hunted the game into the seventeeenth century. Our next question relates to the most important event of that century.

7. Did he take any part in the Commonwealth, or in the troubles leading thereto?—*Yes.*

8. Had he any title beyond that of plain Mr.?—*Yes.*

9. Was he a soldier?—*Yes.*

10. Was he a member of the House of Lords?—*Yes.*

We now begin to see land; and the next fact to be determined is the initial of his name.

11. Is the initial of his name in the first half of the alphabet?—*Yes.*

12. Is it in the first six letters?—*Yes.*

13. Is it the letter F.?—*Yes.*

14. Then it is Lord Falkland?—*Yes.*

Unfermented Bread.—The first account of unfermented bread may be traced back as far as the year 1816. Dr. Thomson, professor of chemistry in the University of Glasgow, wrote an essay on baking for the "Encyclopædia Brittanica," which was published in that work in the same year.

After stating the then ascertained fact that the only purpose served by fermentation in bread-making is the generation of the carbonic acid required to raise the dough, he goes on to observe, that this may be obtained from carbonate of soda by mixing a portion of that article with the flour, and then adding a corresponding quantity of muriatic acid; and further, that "the dough so formed will rise immediately it is put into the oven fully as much, if not more, than bread made with yeast; and when baked will constitute a very light and excellent bread.

This method was tested at the time by several persons, and found to answer perfectly; but it seems to have been regarded only as a philosophical curiosity. Successive attempts were indeed made to turn it to account, but none of them excited much attention till of late years, when it was discovered that bread made in this way was both more wholesome and economical than that made by fermentation.

However well fermented bread may be baked—however thoroughly the products of fermentation may be expelled by baking, and letting the bread be a day or two old before it is eaten—there are some people with whom it seldom agrees,

and some states of the system in which it is anything but easily digested. The reason of this is, that common bread, like everything else that has been partially fermented, ferments easily again, to the great discomfort of many stomachs; and not only so, but by acting as a *ferment*, it communicates a similar action to the food in contact with it, when the digestive power is too weak to control or counteract the operation of the chemical affinities, as a "little leaven leaveneth the whole lump." In cases of severe dyspepsia, fermented bread can seldom be eaten without producing derangement. Many people in the use of fermented bread, suffer severely from acidity, flatulence, and constipation, as well as loss of strength; all of which are avoided by their making use of unfermented bread. This being free from the defects above mentioned, is beneficial to those who suffer from headache, acidity flatulence, eructations, a sense of sinking at the pit of the stomach, distention or pain after meals, and many affections of the skin. These remarks apply to both varieties of the bread, but especially to the brown, which is further invaluable to all who are liable to constipation.

Bread made in this manner contains nothing but flour or meal, culinary salt (the result of the combination of the muriatic acid and bi-carbonate of soda), and water. It has an agreeable, natural taste, and keeps moist and good much longer than common bread. But the advantages of the process are not limited to matters relating to health. It is valuable because bread can be prepared by it in such a short space of time—the whole process of preparation for the oven not exceeding a quarter of an hour, and any person capable of ordinary attention may conduct it; for, on a small scale, it is as simple and easy as the making of a common pudding, except perhaps, that accuracy in quantities is more important. It is valuable, also, because the materials are not perishable, and may be rendered available in places and at times when yeast or other ferment is not procurable; whilst, by their use, a saving is effected in the flour of about ten per cent. In the common process, the saccharine part of the flour, with a portion of both the gum and the gluten, is lost by being converted into carbonic acid gas and spirit, which are driven into the air by the heat of the oven; and this waste is incurred, as was before remarked, solely for the purpose of getting carbonic acid gas to raise the dough. By the new method the waste is avoided, and the gas obtained in a manner equally beautiful and efficacious—another striking instance of the successful application of chemical philosophy to the common arts of life.

We will now proceed to show what utensils are required for the making of unfermented bread on a moderate scale:—Two pair of scales, a large beam and pillar of wood, with a wooden scale-pan, to hold the weights, and at the other end a tin scoop, (which can be procured at a tinman's for 2s. 6d.) to weigh the flour; a small pair of wooden or metal scales for weighing the soda, and a set of avoirdupois weights, from 7 lbs. down to ¼ oz. Also procure a piece of thick sheet lead, and cut it to a ¼ oz. in weight, and then divide it into four equal parts with a common knife (so that there may be no waste *as diagram*;



you will then have four drachms avoirdupois, which will be wanted for small quantities of soda. To measure the acid, take a common wine glass, balance it in the small scales, and then graduate by placing the different weights in the other, filling up the glass with acid, and making a scratch in its side with a file or some sharp instrument. A wooden spatula, or spoon, may be useful for mixing the dough; but we use nothing but our hands, the same as for common dough. As the soda is in little knobs, it should be carefully rubbed through the hands, or if wanted on a large scale, sifted through a sieve into the flour. The acid should be kept in a bottle fitted with a glass stopper, in as cool a place as possible, and the soda in an earthen jar or pot, closely covered. It would save some trouble and lessen risk, to weigh out at leisure portions of soda

suited to each baking, for any given time, and preserve them in packets for daily use. Avoirdupois weight is given as being more easily understood than apothecaries'.

We subjoin some tables of the quantities of chemicals, &c., required for the different sorts of bread:—

TO MAKE WHITE OR FLOUR BREAD.

Flour.	Hydro Chloric Acid.	Bi-Carbonate of Soda.	Water.
12 lbs. ...	1½ ounce ...	1½ ounce ...	6 pints.
8 lbs. ...	1 do. ...	1 do. ...	4 do.
4 lbs. ...	½ do. ...	½ do. ...	2 do.
2 lbs. ...	¼ do. ...	¼ do. ...	1 do.
1 lb. ...	2 drachms	2 drachms	½ do.
½ lb. ...	1 do. ...	1 do. ...	¼ do.

TO MAKE BROWN OR MEAL BREAD.

Flour.	Hydro-Chloric Acid.	Bi-Carbonate of Soda.	Water.
12 lbs. ...	2 ounces ...	2 ounces ...	8 pints.
9 lbs. .	1½ do. ...	1½ do. ...	6 do.
6 lbs. ...	1 do. ...	1 do. ...	4 do.
3 lbs. ...	½ do. ...	½ do. ...	2 do.
1½ lb. ..	¼ do. ...	¼ do. ...	1 do.
¼ lb. ...	2 drachms	2 drachms	½ do.
6 oz. ...	1 do. . .	1 do. ...	¼ do.

It may be necessary to remark, that the same quantity of water will not suit every sort of flour, as some flour will take more than others; so that it will be always best to put less water than what is stated in the tables, and add more afterwards if required. The same quantities of soda mentioned in the tables will do for bread made with buttermilk instead of the muriatic acid.

First mix the soda and the meal or flour as thoroughly as possible. This is best done by rubbing the flour and soda together carefully with the hands, or by sifting it into the flour through a fine sieve. Next pour the acid into the water, and diffuse it perfectly by stirring with a rod of glass or wood. Then mix intimately the meal or the flour and the water so prepared as speedily as possible, using a wooden spoon or spatula for the purpose. They should be put into a quick oven, rather hotter than for common bread, without loss of time. This is most conveniently done in tins, or in iron or earthen pots or pans. The earthen deserve the preference, as they yield a better bread than either the tin or the iron. Common flower-pots suit very well. Iron does better than tin. But the loaves may be made into a batch, and baked in the same way as fermented bread; and if a thin tile be placed between each loaf, the tendency to cohere, which, however, is not greater than in other dough, will be obviated, and the bread will be in all respects equal, or rather superior, to that baked in earthen pans. About two hours would be required for the baking of a batch of four-pound loaves.

The proportions of soda and acid are those which make common culinary salt when united chemically. This union takes place as soon as heat is applied; and then the carbonic acid being set free in its state of gas, expands the dough, or raises it, so as to form bread. If either the soda or acid be in excess, the bread will taste of one or the other, but it will not on that account be unwholesome. We think the addition of half an ounce of salt to four pounds of white flour an improvement. Much handling and hot water are hurtful, by causing the union to take place before the proper time. For this reason the water should be as cold as possible; and more or less of it must be used, as experience will readily direct, to suit the varying quality and age of the flour (the older the flour the more water it takes), which necessarily differs with seasons, soils, and other circumstances. The dough should not be made stiff. The thinner it is, so that it can be handled conveniently, the lighter will be the bread. When too much water has been used, the bread will be unpleasantly moist. The soda should be diffused equally through the flour. If it be deficient in any part, the dough will not rise there; and if in another there be too much, or in a little lump, in that place the bread will show a yellowish spot. Such marks are disagreeable to the eye, but not otherwise injurious. The largest quantity of flour that can be mixed with ease by a beginner is twelve pounds, but three times that amount will not be too much for an experienced person. The whole process of preparation for the oven need not exceed a quarter of an hour,

and any person capable of ordinary attention may conduct it. It is worth mentioning, that the dough of this process forms a very superior paste, better looking, and more digestible, than any made in the common way, and adapted equally for boiling, steaming, or baking.

Unicorns.—The unicorn seems to have been a stock article of the fabulous kind in Ethiopia. Cosmos says that he never encountered a living specimen, but that he saw figures of iron, representing the animal, in the palace of a native king, It had a goatlike appearance. He says that "it is impossible to take the beast; all his strength lies in his horn. When pursued, and on the point of being captured, it throws itself from precipices, and turns a summersault with such dexterity that it receives all the shock on the horn, and escapes safe and sound:" clearly not a beast that would have much chance on the level. Apropos of unicorns, Ludolf says, "the most intelligent people have believed that the beast is but fabulous, because it has been the subject of so many ridiculous descriptions—it being alleged that it cannot be taken alive, and that it is composed of two different natures. These are fables, but we cannot, for all that, say there are no such things as unicorns. Jean Gabriel, a Portuguese, saw, in the kingdom of Damot, an animal which had a fine horn on its forehead, white, and about eighteen inches long. The animal was about the size and shape of a horse, bay in colour, and had the hair of the mane and tail black and short. The natives assured him that it lived in the most densely wooded parts, and that it very rarely showed itself in cultivated places. A Jesuit father had seen a little one, which was brought to his dwelling. The Portuguese who were banished, by the Emperor Adamat Sagued, to a rock in the territory of Numm, which is in the kingdom of Gojam, all testified to the fact that they had seen several, which fed in the forests around the rock. Bermudez and Marmel state the same thing."

"Union-Jack," The.—The term "union-jack" is one which is partly of obvious signification, and in part somewhat perplexing. The "union" between England and Scotland, to which the flag owed its origin, evidently supplied the first half of the compound title borne by the flag itself. But the expression "jack" involves some difficulty. Several solutions of this difficulty have been submitted, but, with a single exception only, they are by far too subtle to be considered satisfactory.

A learned and judicious antiquary has recorded it as his opinion that the flag of the Union received the title of the "union-jack" from the circumstance of the union between England and Scotland having taken place in the reign of King James, by whose command the new flag was introduced. The name of the king, in French "*Jaques*," would have been certainly used in heraldic documents; the union flag of King "*Jaques*" would very naturally be called after the name of its royal author, *Jaques*' union, or union *Jaques*, and so, by a simple process, we arrive at union-jack.

This suggestion of the late Sir Harris Nicholson may be accepted, we think, without any hesitation. The term "jack" having once been recognized as the title of a flag, it is easy enough to trace its application to *several* flags. Thus, the old white flag with the red cross is now called the "St. George's jack," and English seamen are in the habit of designating the national ensigns of other countries as the "jacks" of France, Russia, &c.

United Kingdom, Population of the.—The following table, from the census of 1871, shows the present population of each county.

Counties of England.

Bedford	146,256
Berks...	196,445
Buckingham...	175,870
Cambridge	186,363
Chester	561,131
Cornwall	362,087
Cumberland	220,245
Derby	380,538
Devon	600,814
Dorset	195,454
Durham	685,045

Essex	466,427
Gloucester	534,320
Hants	542,867
Hereford	125,364
Hertford	192,725
Huntingdon	63,627
Kent	847,507
Lancaster	2,818,904
Leicester	268,764
Lincoln	436,163
Middlesex	2,538,880
Monmouth	174,652
Norfolk	438,518
Northampton	243,896
Northumberland	386,959
Nottingham	319,959
Oxford	177,950
Rutland	22,070
Salop	248,062
Somerset	463,412
Stafford	857,333
Suffolk	348,479
Surrey	1,040,270
Sussex	417,407
Warwick	633,902
Westmorland	65,605
Wilts	257,200
Worcester	335,848
York (East Riding)	269,50[illegible]
„ (City)	43,796
„ (North Riding)	291,589
„ (West Riding)	1,837,223

COUNTIES OF WALES.

Anglesey	50,919
Brecon	59,904
Cardigan	73,488
Carmarthen	116,914
Carnarvon	106,122
Denbigh	104,265
Flint	76,245
Glamorgan	396,120
Merioneth	47,369
Montgomery	67,789
Pembroke	91,936
Radnor	25,428

COUNTIES OF SCOTLAND.

Aberdeen	244,607
Argyle	75,635
Ayr	200,748
Banff	62,010
Berwick	36,474
Bute	16,977
Caithness	39,998
Clackmannan	23,724
Dumbarton	58,839
Dumfries	74,794
Edinburgh	328,335
Elgin	43,598
Fife	160,310
Forfar	237,528
Haddington	37,770
Inverness	87,480
Kincardine	34,651
Kinross	7,208
Kirkcudbright	41,852
Lanark	765,279
Linlithgow	41,191
Nairn	10,213
Orkney	31,272
Peebles	12,314
Perth	127,741
Renfrew	216,919
Ross and Cromarty	80,909
Roxburgh	53,965
Selkirk	14,022
Shetland	31,605
Stirling	98,179
Sutherland	23,686
Wigtown	38,752

COUNTIES OF IRELAND.

Antrim	235,956
Armagh	171,355
Carlow	51,472
Cavan	140,555
Clare	147,654
Cork	437,452
Donegal	217,925
Down	277,775
Dublin	410,252
Fermanagh	92,688
Galway	235,073
Kerry	196,014
Kildare	84,198
Kilkenny	96,638
King's County	75,781
Leitrim	95,324
Limerick	151,485
Londonderry	148,690
Longford	64,408
Louth	69,809
Mayo	245,855
Meath	94,480
Monaghan	112,785
Queen's County	77,171
Roscommon	141,246
Sligo	115,3[illegible]1
Tipperary	212,234

Tyrone	215,866
Waterford	110,959
Westmeath	78,416
Wexford	132,506
Wicklow	78,509

Useful Disinfectant.—Deodorising fluids, almost without number, are in use, and many of them are excellent, but nearly all are expensive. Yet green copperas, which costs but one-third of a penny per pound, is a most excellent one, and one pound dissolved in two or three gallons of water will immediately deodorise and render harmless the most offensive cesspool or drain.

Useful Receipts for the Frying-pan.—Cut in small dice half a pound of solid meat, keeping the bones for soup; put your pan, which should be quite clean, on the fire; when hot through, add an ounce of fat, melt it and put in the meat, season with half a teaspoonful of salt, fry for ten minutes, stirring now and then, add a teaspoonful of flour, mix all well, put in half a pint of water, let simmer for fifteen minutes, pour over a biscuit or stale bread, previously soaked, and serve The addition of a little pepper and sugar is an improvement, as also is a pinch of cayenne, curry powder, spice, sauces; pickles used in small quantities would be very relishing.

Salt meat may be dressed as above, omitting the salt, and only requires warming a short time; or, for a change, boil the meat plainly, or with greens or cabbage, or dumplings, as for beef; then the next day cut what is left in small dice—say four ounces; put in a pan an ounce of fat, when very hot, pour in the following:—mix in a basin a tablespoonful of flour, moisten with water to form to the consistency of thick melted butter, then pour it in the pan, letting it remain for one or two minutes, or until set, put in the meat, shake the pan to loosen it, turn it over, let it remain a few minutes longer, and serve.

To cook bacon, chops, steaks, slices of any kind of meat, salt or fresh, sausages, black puddings, &c.—make the pan very hot, having wiped it clean, add in fat, dripping, butter, or oil, about an ounce of either, put in the meat, turn three or four times, and season with salt and pepper. A few minutes will do it. If the meat is salt, it must be well soaked previously.

Vaccination.—This was first introduced to the notice of the profession by Dr. Jenner, as a mode of producing a disease which, although its immediate effects upon the body are extremely slight, yet has the power of effecting such a change in the human system as to render it unsusceptible of the infection of small-pox. This opinion originated in the fact which had been long notorious, that the milkers in the dairy-farms in Gloucestershire, to whom cow-pox had been communicated from the cow in the course of their occupation, were not afterwards liable to be affected with small-pox. As the virus could not always be obtained from the cow, Dr. Jenner conceived the idea that it might be equally effectual as a preventive of small-pox if communicated by inoculation from one individual to another; and the observations made during the first fifteen years after the introduction of vaccination, seemed to confirm this opinion. The progressive experience of late years has confirmed vaccination to be a real blessing to the whole race.

After vaccination, when small-pox occurs, the febrile symptoms are generally mild, and almost always subside on the seventh day, after which the patient rapidly recovers.

With regard to the proper age for vaccinating an infant, experience has shown that, although it may be proper to defer it for the three or four first weeks of an infant's life, on account of a variety of circumstances connected with that period of life, yet, if the organization of a child be perfect, and if it be in good health, the sooner it is vaccinated after the month the better.

The diseases which interfere with vaccination as a preventive of small-pox, are eruptive diseases, teething, and affections of an inflammatory nature. Under eruptive diseases and teething, the specific irritations which these occasion prevent the fever attending cow-pox from being sufficient for the constitutional change requisite to secure the child from the infection of small-pox. In order to

be certain that the constitution has been properly affected, some medical practitioners re-vaccinate the child on the fifth or sixth day after the original vaccination with a little of its own lymph; and, while the original vesicles proceed regularly to their termination, if those from the re-vaccinated be accelerated, acquire the inflamed areola, and scab at the same time with the first, they then declare that the system has been properly affected.

Parents are prone to object to more than one or two punctures being made in the arm in vaccination; but in order to receive the constitutional disease, three or four should be made in each arm, and lymph ought never to be taken from any arm on which there are not two or three vesicles, one only of which should be opened.

By vaccination in infancy, if thoroughly well-performed and successful, most people are completely insured, for their whole life-time, against an attack of small-pox; and in the proportionately few cases where the protection is less complete, small-pox, if it be caught, will, in consequence of the vaccination, generally be so mild a disease as not to threaten death or disfigurement. If, however, the vaccination in early life have been but imperfectly performed, or have from any other cause been but imperfectly successful, the protection against small-pox is much less satisfactory, neither lasting so long, nor while it lasts being nearly so complete as the protection which first-rate vaccination gives. Hitherto, unfortunately, there has always been a very large amount of imperfect vaccination; and in consequence the population always contains very many persons who, though nominally vaccinated and believing themselves to be protected against small-pox, are really liable to infection, and may in some cases contract as severe forms of small-pox as if they had never been vaccinated. Partly because of the existence of this large number of imperfectly vaccinated persons, and partly because also even the best infantile vaccination sometimes in process of time loses more or less of its effect, it is advisable that all persons who have been vaccinated in infancy should, as they approach adult life, undergo re-vaccination. Generally speaking, the best time of life for re-vaccination is about the time when growth is completing itself, say, from 15 to 18 years of age, and persons at that period of life ought not to delay their re-vaccination till the time when there shall be special alarm of small-pox. In proportion, however, as there is prevalence of small-pox in any neighbourhood, or as individuals are from personal circumstances likely to meet chances of infection, the age of 15 need not be waited for; especially not by young persons whose marks of previous vaccination are unsatisfactory. In circumstances of special danger, every one past childhood, on whom re-vaccination has not before been successfully performed, ought without delay to be re-vaccinated. Re-vaccination, once properly and successfully performed, does not appear ever to require repetition. The nurses and other servants of the Small-pox Hospital, when they enter the service, are invariably submitted to vaccination, which in their case generally is re-vaccination, and is never afterwards repeated.

No persons can possibly be so dangerously exposed to the contagion of small-pox as the nurses in the Small-pox Hospital. They live in a small-pox atmosphere, they handle the complaint all day, and breathe its densest infection. Yet they are entirely secure against it, and for what reason? They are, once for all, vaccinated on their admission to service in the hospital, and the operation is never repeated. The same precaution is taken with the other servants of the hospital, who also are in various ways exposed to special chances of infection. But the protection thus afforded is so perfect that "*the resident surgeon of the hospital, during his thirty-four years of office, has never known small-pox affect any one of those nurses or servants.*"

The transmission of small-pox is as systematic, and almost as mechanical, as that of the artificial complaint which is its antidote. Persons are inoculated with small-pox by contact with persons already suffering from small-pox, just as they are inoculated with cow-pox

from children who have undergone successful vaccination. Moreover, with such very rare exceptions as prove the rule, a person properly vaccinated is as insensible to the contagion of small-pox as he is to the effect of the vaccine lymph.

If we have faith in science, if we can trust the overwhelming testimony of the past, if we are impressed by the surrounding dangers of the present, and cherish love for our kindred, we shall not defer the resort to protective measures, but seek in the simple safeguard of vaccination or re-vaccination a shield against one of the direst ills that flesh is heir to.

Vaccination, Law of.—It is stated by medical men that if vaccination were generally practised, that terrible disease, small-pox, would be unknown. In 1870 a new Act came into operation which provides that when the birth of a child is registered, the registrar is to give notice that the child must be vaccinated within three months, under a penalty of 20*s*. If a registrar shall give notice to a justice that he has reason to believe that a child under fourteen has not been successfully vaccinated, and that the notice given to the parent has been disregarded, the justice may order the child to be brought before him, and he may make an order directing such child to be vaccinated within a certain time. If at the expiration of such time the child shall not have been vaccinated, the person upon whom the order has been served is liable to a penalty of 20*s*.

Variety of Nature.—Nothing is more remarkable in nature than its variety. The flowers of the field and the leaves of the forest have, each and all, their general likeness and their particular dissimilarity. It is easy for a botanist to determine the species of a plant from its specific and invariable outlines when examined by itself; yet no leaves on the same stem will be found exactly correspondent. It would be endless to specify and particularise. The same holds true with respect to all the other works of the Creator, and constitutes the eternal distinction between nature and art. The one is bounded and imitative, the other infinite.

The human face is another remarkable and striking illustration. It is scarcely comprehensible by our limited faculties, how, within such a narrow compass, there could possibly exist such a variety of modifications, such a diversity of lines and lineaments, such a general resemblance, such an individuality. Nevertheless, such holds true with respect to all the families and kindreds, and cities, and kingdoms, and regions of the earth, from Zembla to the Tropics, from the swarthy Moor to the blue-eyed Russ. Though an inhabitant of an extensive metropolis is in the daily habit of seeing a thousand different faces, we are bold to affirm that no one, even allowing him to have lived to the age of Thomas Parr, ever beheld two human beings exactly the reflected shadows of each other.

Varnish and Paint Spots, To Remove.—Rubbing with spirits of turpentine will effectually remove varnish; while paint spots may be effaced by either being softened by heat and scraped off, and then rubbed with turpentine, or they can be dissolved by caustic lye—made by boiling together, in half a pint of water, two ounces each of washing soda and lime.

Varnish for Coloured Drawings and Prints.—Take of Canada balsam one ounce; spirits of turpentine, two ounces; mix them together. Before this composition is applied, the drawing or print should be sized with a solution of isinglass in water; and, when dry, apply the varnish with a camel-hair brush.

Varnish, Gold which does not lose its Colour by Exposure to Air and Light.—A very beautiful and permanent gold varnish may be prepared in the following manner:—Two ounces of the best French garancine are digested in a glass vessel with six ounces of alcohol, of the specific gravity of 0.833, for twelve hours, pressed and filtered. A solution of clear orange-coloured shellac, in similar alcohol, is also prepared, filtered, and evaporated, until the lac has the consistence of a clear syrup; it is then coloured with the tincture of garancine. Objects coated with this have a colour which only

differs from that of gold by a slight brown tinge. The colour may be more closely assimilated to that of gold by the addition of a little tincture of saffron.

Varnish, Mastic. — Take four ounces of mastic tears, and one pint of oil of turpentine. Put them into a stone bottle, which should be plunged into a saucepan of hot water, and kept over a charcoal fire until dissolved, which generally takes an hour and a half. The cork should be notched at the side to prevent the bottle bursting.

The time of boiling varies, of course, with the degree of heat employed; therefore the best way to test its fitness is to take a little from the bottle, and apply it to the finger; if it appears on cooling of the consistence of a thick syrup, soon becoming ropy, then drying and glueing the fingers together, and leaving a shining appearance, it is sufficiently boiled; if the signs are absent, the boiling must be repeated.

The greatest caution should be exercised in making varnishes, not to have a fire with a flame, the pot too low, or the bottle too full; and always to have a pail of water at hand, to put out the fire in case the vapour from the varnish inflames.

Varnish, White.—Take an ounce of gum mastic, two ounces of gum juniper, two drachms of Venice turpentine, and one pint of spirits of wine. Mix well, and dissolve by heat.

Vegetable Life, Duration of.—Lord Lindsay states that, in the course of his wanderings amid the pyramids of Egypt, he stumbled on a mummy, proved by its hieroglyphics to be at least 2,000 years of age. On examining the mummy after it was unwrapped, he found in one of its closed hands a tuberous or bulbous root. He was interested in the question how long vegetable life could last, and he therefore took that tuberous root from the mummy's hand, planted it in a sunny soil, allowed the rains and dews of heaven to descend upon it, and in the course of a few weeks, to his astonishment and joy, the root burst forth, and bloomed into a beautiful dahlia.

Vegetable Substitutes.—A few hints upon what we are to do in the dearth of vegetation may be serviceable.

A correspondent of *The Journal of Horticulture* says: "I have found parsnip tops very useful when I have been short of greens. Although they have rather a peculiar flavour, they are not to be despised; the crowns cut off the parsnip will freely take root, and produce a good crop if planted firmly. Common turnips, and swedes, if planted on a little bottom heat, would produce a few good dishes in a very short time. Turnips sown now on a warm border would be found very useful, as they almost always begin to run to seed, instead of making bulbs, if early sown. Salsafy and scorzonera tops make good substitutes for spinach, and may be blanched like seakale if preferred. Celery makes a very useful dish if boiled and served like seakale, although we do not often see it used in that way. Early long radishes will be found very acceptable if boiled and served as asparagus; and if cucumbers be cooked like vegetable marrows it will hardly be possible to detect the difference in their taste." These hints are not of much use, except to those who have gardens, and cultivate small crops for their own use. But the hints as to celery and radishes are of wider utility.

Vegetables, Fruit, and Flowers, Introduction of, into England. — The advantages arising from the exploration of foreign countries are scarcely to be enumerated. To the discovery of America by the illustrious Columbus we owe that universal favourite, the potato. The pear, the peach, the apricot, and the quince were respectively brought into Europe from Epirus, Carthage, Armenia, and Syria, and by degrees into England. Cherries are of very ancient date with us, being conveyed into Britain from Rome, A.D. 55. In the King of Saxony's Museum at Dresden, there is a cherry-stone, upon which, aided by a microscope, more than a hundred faces can be distinguished. Dr. Oliver was shown a cherry-stone in Holland with 124 heads upon it, and all so perfect that every one might be seen with the greatest ease by the naked

eye. Melons were originally brought from Armenia. According to Mr. Andrews, fruit was very rare in England, in the reign of King Henry VII.; that gentleman informs us that apples were then not less than one or two shillings each; a red rose two shillings; and that a man and woman received eight shillings and fourpence for a small quantity of strawberries. Cabbage, carrots, &c., were introduced about the year 1437. Previous to this period Queen Catherine of Arragon, first consort of Henry VIII., when she wanted a salad, was compelled to send to Flanders or Holland on purpose. About this time apricots, gooseberries, pippins, and artichokes were first cultivated. The currant tree came from Zante, and was planted in England in 1533. Cos lettuces were brought from the Island of Cos, near Rhodes, in the Mediterranean. Asparagus, beans, peas, and cauliflowers were introduced in the beginning of the reign of Charles II. Nor can we claim the jessamine, the lily, or the tulip; for the jessamine came from the East Indies; the lily and the tulip from the Levant; the tube-rose from Java and Ceylon; the carnation and pink from Italy; and the auricula from Switzerland. Thus it appears that nuts, acorns, crabs, and a few wild berries were almost all the variety of vegetables found indigenous to this country.

Vegetables, To Preserve.—For preserving potatoes, they are first washed and peeled, pierced all over, and placed in salt and water for thirty minutes. They are next put into a copper with pearl barley, say one quart of barley to ten gallons of water, and left to simmer. After about twenty minutes, they are taken out and allowed to cool, then they are broken into small particles, and dried and exposed to a temperature of 110 degrees Fahrenheit. They are then ready for packing. For preserving carrots, onions, turnips, cabbages, cauliflowers, beans, peas, &c., the inventor uses a solution of gum arabic and carbonate of soda.

Vegetarianism.—"The vegetable creation alone," observes Dr. Searle, "conjoined with the air, abounds in all the essential elements of animal nutrition and man's structure. But Nature, in her bounty to man, and in order that his race may inhabit the whole earth, has not confined his diet to vegetables alone, but has given him the power also of converting the substance of other animals into his own kind; and we accordingly find both his teeth and stomach adapted to this omnivorous condition of his existence." Hence, in the higher latitudes and polar regions, where vegetation is limited, by the short period of the sun's genial influence, to a few months of the year, animal substance is man's almost exclusive diet. In tropical regions, on the other hand, man's diet is as almost exclusively vegetable. In the intermediate and temperate zones of the earth's surface, again, man's diet is of a mixed kind, consisting of both animal and vegetable substances. With these facts before us, a practical inference may be fairly deduced, which is, that in the colder seasons of our own climate, our diet should consist more largely of animal, and, in the summer, of vegetable kind—which accords not only with the desire and appetite of man, but likewise with the productions of the season.

Veins and Arteries, Distinction between.—The knowledge of the distinction between arteries and veins, is of the utmost practical importance, paticularly to people residing in districts remote from surgical aid, where those who receive surgical wounds may actually bleed to death for want of such easily acquired information. The arteries are composed of no less than four very firm, strong, elastic membranes or coats, and this, as well as their being generally seated deeply in the flesh, to guard them from injury, renders them less liable to be hurt by accident, but when cut or wounded the firmness of these coats prevents their closing, and hence arises the fatal tendency of wounds of large blood vessels, which will remain open until they are tied, or until death ensues. Another distinctive character is, that the pulse of the heart is felt in the arteries only.

The veins lie near the surface, and bleeding from them may easily be

stopped, in common cases, by closing the orifice, and bandaging in the manner usually adopted by operators after having opened a vein in the arm or foot. When a person or animal is seriously wounded and a surgeon cannot be immediately procured, ignorant bystanders will often content themselves with laying on a little lint, or cobweb, or some other trifling application, wholly inadequate to the case; they ought to know that when such remedies fail, and more especially when the blood flows from the wound by pulsatory leaps, it should be arrested by mechanical compression, until professional aid can be obtained. This can easily be done by the most ignorant person present, by winding a string or a bandage tightly above the wound. Those more skilful, or better informed, may take up the severed artery, and twist or tie it up.

Velvet, To Restore the Pile of.—Stretch the velvet out tightly, and remove all dust from the surface with a clean brush, afterwards well clean it with a piece of black flannel, slightly moistened with Florence oil. Then lay a wet cloth over a hot iron, and place it under the velvet, allowing the steam to pass through it; at the same time brushing the pile of the velvet till restored as required. Should any fluff remain on the surface of the velvet, remove it by brushing with a handful of crape.

Ventilation by Air Fountains. — A mode of ventilating churches, halls, &c., by jets of fresh air passing through pipes to the centre of the space to be ventilated, and above reach of the heads of those present, in conjunction with ways of egress for the foul air mixed with it, has recently been proposed by Mr. Moffat Smith, architect. This system of ventilation could be combined with warming apparatus. The fresh air would enter the central space through ornamental tube standards, or could descend from the roof, as in a ball-room, although the jets would be turned upwards. By means of valves the air could be regulated at pleasure.

Ventriloquism. —The main secret of ventriloquism simply consists in first making a strong and deep inspiration, by which a considerable quantity of air is introduced into the lungs, to be afterwards acted upon by the flexible powers of the larynx, or cavity situated behind the tongue in the windpipe; thus prepared, the expiration should be slow and gradual. Any person, by practice, can, therefore, obtain more or less expertness in this exercise, which is capable of much amusement; the voice is still modified by the mouth and tongue, though not apparently so; and it is in the concealment of this aid that much of the perfection of ventriloquism consists.

Vinegar.—Next to salt, this is perhaps the most important condiment; it is very serviceable in aiding the digestion of celery, lettuce, beet-root, and other raw vegetables, and in preventing them from inducing flatulence; it is equally useful in promoting the digestion of rich and oily substances, such as salmon. Lemon-juice has a similar effect when used with goose and wild-fowl; upon the same principle apple sauce is, probably from the malic acid which it contains, eaten with pork. Acetic acid is the volatile acid principle, which, diluted with water, constitutes vinegar. It is prepared from sugar, cyder, malt, and wine, and from the destructive distillation of wood. This condiment is both useful and wholesome—more so, however, to some persons than others. But, taken immoderately, vinegar is decidedly injurious, destroying the digestive powers rather than assisting them; even, indeed, inducing active disease of the stomach. It is sometimes used, in large quantities, for the reduction of corpulency, which is a very injurious practice.

Vinegar is a valuable disinfectant; burnt or sprinkled about a sick-room, it becomes both refreshing and agreeable. The colour of the brown vinegar is generally imparted by brown sugar.

Vinegar from Ripe Goosberries.—The thin-skinned yellow-hairy are the best, but any sort will do. Wash the ripe fruit, and to every quart (when washed) add three quarts of water. Let them steep together two days, frequently stirring. Then strain, and to every quart of liquor add one pound of coarse brown sugar. Stir them well together, and put

in the cask—yeast will not be required. Spontaneous fermentation will soon take place; it will be expedited by warmth. It is not necessary to add vinegar, but if a little is added as above when the fermentation ceases, it will the sooner be fit for use.

Vinegar from the Refuse of Bee-hives.—Excellent vinegar may be made from the refuse of bee-hives. Break up all the empty combs, and steep in twice their bulk of water. Stir often, cover up, and keep in a warm place. Thus it is to remain in a tub or pan from twelve to twenty days, being frequently stirred. Then strain the liquor, stopping short when it begins to look yellow. Clean and dry the tub or pan, return to it the strained liquor, and again set it in a warm place, covered up with sacks or flannels. In five or six weeks put it into the cask, but leave the bung open. It will soon be fit for use; then tighten the bung.

Vinegar, Primrose, To Make.—Six pounds of good raw sugar, eighteen quarts of water, boil together for fifteen or twenty minutes. When about the warmth of milk from the cow, add one peck of full-grown, clean-picked primroses, stalks and all. Stir in a large tablespoonful of fresh solid yeast, and let it ferment for three or four days, taking care to stir the whole once or twice daily. Put the whole into a clean sweet cask, or one that has been previously used for the same purpose—cover the bung-hole with strong paper pasted down. This is to exclude dust, but holes are to be pricked in the paper to admit air. Set the cask in a warm place; if possible, exposed to the sun under a skylight. In three months the vinegar will be ready for use. It keeps best drawn from the cask as wanted. The cask used from year to year will ensure the earlier ripeness, and produce vinegar of the best quality. Those who require much vinegar for pickling and other purposes, may find it answer to have two vinegar casks, one in draught, the other with the new-made vinegar of the *current* year, so filling them alternately.

Vines, Best Method of Propagating.—The plan is very simple, and has been practised with great success:—Get as many pieces of good turfy loam, six inches square, as you intend putting in eyes; cut a little hollow in the centre of each, and lay them close together, like a bed, on boards or on a floor, in any house where there is plenty of light, and where the temperature is about 55 or 60 deg. Prepare your eyes in the usual way, about the end of February, and insert one in the centre of each turf, and cover with a little light soil. In a few weeks they will be throwing their quill-like roots round the edges of the turf, and just about to encroach upon each others' territory, when they must be transferred to turfs of larger dimensions, according to the time that is likely to elapse before you will be ready for planting or potting them; or, what is easier, just set the 9-inch turfs farther apart, and fill the spaces between with finely-sifted loam and sand. Into this you will find the roots to ramify in great quantity round the central turf, and when you plant or pot, take hold of the sod fearlessly, and the roots will come away from among the light soil, hanging like a fringe round the turf and without damage to a spongiole. Set them on the ready prepared border, cover the roots with a little soil, and planting is finished. "We have frequently," says Mr. Simpson, "performed the operation in a blazing sun without the plants flagging. They rush up with astonishing rapidity, and the roots get a grasp of the border the first year, before the fibre gets decayed and sodden, which is of some importance. When the plants are intended for potting, crock the pots and fill them up with soil till within four inches of the top, bring them into the house where the young vines are, set a sod in each, and fill up to the level of the turf."

Vines and Fruit Trees, How to Protect from Frost.—The *Messager Agricole*, a French periodical devoted to scientific agricultural and horticultural pursuits, publishes a paper on this subject, written by M. Gaston Bazille, Président de la Société Centrale d'Agriculture de l'Hérault, and which has received a *prime*

d'honneur. "It is," says the author of the memoir, "just before sunrise, when the sky is serene and the atmosphere calm, that danger to the vine is immi-nent, even when the thermometer is some degrees above the freezing point; but if the heavens are cloudy, or ever so slight a mist obscures the sun, there is no danger to be apprehended. After many trials of various means of producing a dense smoke economically and quickly, and maintaining it from about an hour before sunrise until an hour or two after, I have found nothing answer nearly so well as the burning of refuse of coal-tar distillation, which costs a mere trifle. This, when set fire to in shallow earthenware pans, gives out a dense black smoke, effectually obscuring the brightest sky. These pans should be placed at intervals of about twenty yards on the east and north sides of the vineyard only; for it is to be observed that it is useless to place them on the south or west, inasmuch as when the wind is from these points of the compass the vines never suffer. The critical period appears to be about the middle of April. If," says the memoir, "the sun has set in a clear sky with a north wind, the chances are there will be frost in the morning, and it is then that my workmen are up earlier than usual. The thermometer is consulted frequently, and whenever it is found not to be seven degrees above freezing, a number of them, each carrying a lighted torch, passes quickly along the line in which the inflammable material has already been placed in suitable vessels, applying his torch to each as he passes rapidly along, and in a few minutes the whole vineyard is protected by a curtain of black smoke. In the year 1864, this process was repeated on three consecutive days, viz., the 9th, 10th, and 11th of April, at my vineyard of St. Sauveur, and on the first day caused no little alarm to a village situated about five miles south of our operations, and when the cause of the smoke became known, created considerable amusement and gave rise to many jokes by my neighbours at my expense; but, as my vines were preserved while theirs suffered considerably during these three days, they are now, when spring frosts are expected, to be seen in their vineyards torch in hand. The system is not expensive; five or six men will suffice to protect a vineyard of thirty hectares (75 acres), and an outlay of about fifty francs for material and labour." Perhaps the experience of M. Gaston Bazille with respect to vines may be studied with advantage by English horticulturists, with a view of protecting fruit trees from early frosts.

Violin Bows.—It may, perhaps, appear somewhat surprising when it is stated that it is almost as difficult a matter to obtain a first-rate bow as a first-rate violin. In the selection, therefore, of a bow, do not be led away at first by one that is highly ornamental, because such bows on trial are found generally "more ornamental than useful," but choose a neat and well-finished bow, that combines lightness with great elasticity, and do not forget to cast the eye both *up* and *down* the stick when the bow is screwed up sufficiently tight for use, and observe whether or no the stick is perfectly straight; for if it be at all warped, either to one side of the hair or the other, it will at once show that the bow is defective, and by no means a first-rate one.

The three requisites of a good bow are—lightness with elasticity; uniform bending, by which the nearest approach to the hair is exactly midway between the nut and head; and neat and accurate workmanship; under this last head is included the hairs of the bow, which should be level and of fine quality. New bows, that is, those that have not been made any length of time, are very apt to warp. Care should therefore be taken never to leave the bow, when not in use, screwed up, but always to unscrew till there be no strain upon the stick whatever.

A good method of preserving bows from warping is to hang them up by the head, or lay them on a flat surface, occasionally changing their position by turning them over.

Violin bows do not vary much in length; the proper length of hair is from

about 25½ to 36 inches. It is needless to say that in the purchase of a bow you must not expect to obtain a first-rate one for a small sum.

Violin Bows, To Re-Hair.—Select a moderately stout length of horse-hair, get a piece of shoemakers' flax, well wax it with shoemakers' wax, bind it tight round just below where it is already bound (as it will not do to trust to as you buy it), tie and cut off the old binding, burn the ends of the hair, and dip into powdered rosin while warm. Now apply it a second time, burning it close to the wax thread, insert it into the nut of the bow, put in the plug, dovetail the slip, &c., make a small wedge to fit the ferule on the flat side; put on the ferule, spread the hair evenly, put in the wedge underneath the hair, and press it home; put the nut in the stick and take the proper length of hair; now turn up the nut endways, comb the hair evenly, and bind as before described, insert it in the point of the bow, screw on the nut, and the hair will be of equal tension.

Violinists, Hints to.—How often it happens that the amateur possesses a very good violin, but in a very bad state for playing—imperfectly strung—with, perhaps, a bridge more suitable for a tenor than a violin; and if the amateur is bold enough to look inside, he will very likely discover that the sound-post is anything but perpendicular, or is perchance down altogether.

If it is desired to possess a more than ordinary skill on the violin, or indeed on any other instrument, endeavour by *all means* to purchase a *first-rate instrument.* Having obtained one, it is essential to take particular care of it—for such an instrument is indeed a treasure—and to keep it in the best possible condition for use. A violin of value should be kept in a strong case, well lined with flannel or cloth, and should never be left exposed to the open air. The strings ought also to be carefully selected, both as to quality and size.

It will always be found that the Roman strings, such as are clear and *rough* to the touch, have the finest tone; they are more apt, perhaps, to run false than English strings, but when true, they are *infinitely superior.* By means of a gauge the player can always keep to the same size, after it is proved which description of strings produce the finest tone, and *vibrate the longest.* If the strings are found to vibrate when pulled by the finger (pizzicato) while *twelve* may be counted at a moderate rate, it will be a criterion that the violin is in tolerable order."

Again, with regard to stringing the violin, great care must be taken that none of the strings are false; for if such is the case they are good for nothing (at least to any one who has a good ear).

It sometimes happens, however, that some of the fifths are not correct, though the open ones may be in perfect tune. The reason of this is that all the strings do not run from the nut to the bridge exactly the same thickness, so that, if one of the strings be turned upside down, the thick ends of both strings, by this means, will be brought together, and the stopped fifths will then be perfect; for unless the strings be quite true, and the fifths correct, it is quite impossible to play in tune.

Always tune the violin up to concert pitch, and do not let the strings down after playing, since the less they are screwed up and down, the less likely they will be to break. Great care and no little patience is required in putting in a new string, particularly a first string; it must not be pulled up hastily, but gradually, in rather a coaxing manner, at the same time rubbing it with the finger. A little fine olive or almond oil, rubbed occasionally on the strings, will preserve them and improve their tone. The strings for use should be kept in a tin box, without any oil upon them, wrapped in gutta-percha.

Before putting the violin into its case, always wipe the moisture from the strings, and do not allow the resin to accumulate under the bridge. Be careful always to keep the bridge perpendicular, and that each foot of the bridge is made to fit exactly the spot where it should stand. The tone is the fullest and purest when the bridge stands perpendicular. Moreover, if it leans to the finger-board it is apt to fall down.

The bridge should be placed at equal distances from the S holes, with its front edge in a line with the outer notches on the S holes. These notches are guides for the position of the bridge. As to the proper height and breadth of the bridge, they must be made according to circumstances.

With respect to the position of the sound-post, no exact rule can be laid down. Usually it stands from one-eighth of an inch to half an inch immediately behind the right foot of the bridge, and about the same distance from its S hole that the bass-bar does. The bridge will then exactly occupy the space between the two, sound-post and bass-bar. Its position will be *further from* the foot of the bridge in first-rate violins than in inferior ones. Care must also be taken that the sound-post moves easily about, and yet stands firmly when the bridge is off; it should always stand perpendicularly, which can only be ascertained by taking out the pin which holds the tail-piece, and looking through the hole into the interior of the violin, by which means one can also see whether the post fits truly at the top and bottom.

While speaking of the tail-pin, we may here observe that it should always screw firmly into its hole, being apt to work out from the constant pull of the strings.

The best implement for putting up the sound-post is a strong piece of round steel or iron, bent at a right angle at one end, thus—

It should be about six inches long, and made with a point at the opposite end. A small piece of cardboard, also, about three inches long and half an inch wide, with a small square piece cut out at one end, thus—



will be all that is required for measuring the distance at which the sound-post stands from the S hole; and by drawing the sound-post into the hole in the card, and then measuring the distance on the other end of the card, this will give the whole distance from the furthest side of the sound-post to the S hole; and if afterwards the performer places the piece of card on the top side of the violin, he will at once see the actual position of the sound-post.

No one can be so good a judge of the proper place for the sound-post of his violin as the owner, who is constantly playing upon it.

Viscount.—This title was formerly applied to the sheriff of a county, but it was not used as a designation of nobility before the reign of Henry VI. A viscount is uniformly created by patent, and the title descends from father to son, unless especially provided against. The honour was originally conferred as an advancement to barons, but afterwards created frequently with the barony; and, in modern times, it has been conferred on private gentlemen as a reward for distinguished services.

Viscounts are addressed by the Crown as "Our Right Trusty and Well Beloved Cousins."

Letters to them bear the superscription—"To the Right Honourable Viscount ——."

The sons and daughters are simply "The Honourable."

Visiting and Visitors.—Morning visits should not be long. In this species of intercourse the manners should be easy and cheerful, and the subjects of conversation such as may be easily terminated. The time proper for such visits is too short to admit of serious discussions and arguments. The conduct of others often, at these times, becomes the subject of remark; but it is dangerous and improper to express opinions of persons and characters upon a recent acquaintance.

A newly-married lady would do wisely to sound the opinions and to examine for herself the characters of a new circle of acquaintance, before exposing her own sentiments. Not that she should be afraid of broaching them, but that she should avoid the possibility of unknowingly giving pain and offence. When she is better acquainted with the circle of which she has become a member, she will see more clearly around her, and then, as she thinks fit, she may diminish her

caution. Friendships are acquired and secured by qualities of intrinsic value; but amongst mere acquaintances, it is by pleasing manners chiefly that we must expect to obtain a favourable reception. The deportment of a bride, in particular, is so far important to herself, that it may decide in a degree her future estimation in society.

When it is desirable to keep together a large circle of acquaintance, morning visits cannot very well be dispensed with. As time and circumstances seldom permit the frequent interchange of other visits, our acquaintance would become estranged from us if our intercourse with them were not occasionally renewed by receiving and paying morning visits.

A good economist of time will, of course, keep morning visits strictly for this purpose; and, not considering them as intended merely for amusement, will not make them more frequently than is necessary. The economy of time, so essential to the head of a family, will also prompt certain limitations as to the periods of receiving those visits.

As the words "*Not at home*," have become synonymous with "*being engaged*," they never deceive, nor are intended to deceive; therefore they may be employed innocently, as far as regards our friends and ourselves, but we are not quite so well satisfied as to the effect upon our domestics, whom in the morning we may desire to utter a deliberate falsehood (according to their apprehension) for our convenience, and whom in the evening we may find occasion to reprimand for an untruth employed in their own service.

How can we expect ignorant servants to discriminate between the falsehood which the use of the phrase, "Not at home" in its literal meaning conveys when it is employed to forbid the intrusion of a visitor at an unseasonable moment, and the meaning which fashion and custom have now attached to it. Servants should always be made acquainted with the real state of the case; and it should be explained to them the impossibility of adopting plainer or more direct language in the present artificial state of society.

Voice, The.—There are seven distinguishing characters of voice in men and women. In men they are termed bass, baritone, tenor-robusto, or full tenor, and tenor-legiardo, or counter-tenor. Those of women are termed contralto, mezzo-soprano, and soprano. The compass will be found to vary according to the length of the vocal chords and windpipe, the longest possessing the power of producing the greatest number of notes. Thus, one voice may comprise a range of twelve notes, and another of sixteen, and yet both may be of the same character. The change which occurs in the voice in the decline of life is the result of the ossification of the cartilages of the larynx, and the hardening of its ligaments which produce a hard and cracked sound.

Voice, Influence of Temper on the.—The influence of temper upon tone deserves much consideration. Habits of querulousness, or ill-nature, will communicate a cat-like quality to the singing, as infallibly as they give a like quality to the speaking voice. That there really exist amiable tones is no unfounded opinion. In the voice there is no deception; it is, to many, the index of the mind, denoting moral qualities; and it may be remarked, that the low, soft tones of gentle and amiable beings, whatever their musical endowments may be, seldom fail to please; besides which the singing of ladies indicates the cultivation of their taste generally, and the embellishment of their mind.

Waits,—The waits, or Christmas bards, are a remnant of the old minstrels attached to courts and cities, and who added to their musical offices the more important, though less pleasant duty, of watching and guarding the streets. They perambulated the principal thoroughfares in small parties, crying the hour at each corner, or street, or lane; and inasmuch as in those remote days—during the thirteenth and fourteenth centuries—our cities were not lit up at night by anything like lamps, these waits carried beacons, or large fires supported upon high poles. Their office appears to have fallen into disuse during the reign of Henry VIII.; subsequently, the

watchmen, established on a better footing, exercised their musical powers only at Christmas time; and hence the practice of bands of nocturnal musicians perambulating our streets at this season in "the witching hour of night."

Wages Table.

Per Year.	is			Per Week of 6 Days.	is for				
	Per Month.	Per Week.	Per Day.		5 Days.	4 Days.	3 Days.	2 Days.	1 Day.
£	£ s. d	£ s. d.	s. d.	s.	s. d.	s. d.	s. d.	s. d.	s. d.
1	0 1 8	0 0 4½	0 0¾	1	0 10	0 8	0 6	0 4	0 2
2	0 3 4	0 0 9¼	0 1¼	2	1 8	1 4	1 0	0 8	0 4
3	0 5 0	0 1 1¾	0 2	3	2 6	2 0	1 6	1 0	0 6
4	0 6 8	0 1 6½	0 2½	4	3 4	2 8	2 0	1 4	0 8
5	0 8 4	0 1 11	0 3¼	5	4 2	3 4	2 6	1 8	0 10
6	0 10 0	0 2 3¾	0 4	6	5 0	4 0	3 0	2 0	1 0
7	0 11 8	0 2 8¼	0 4½	7	5 10	4 8	3 6	2 4	1 2
8	0 13 4	0 3 0¾	0 5¼	8	6 8	5 4	4 0	2 8	1 4
9	0 15 0	0 3 5½	0 6	9	7 6	6 0	4 6	3 0	1 6
10	0 16 8	0 3 10	0 6½	10	8 4	6 8	5 0	3 4	1 8
11	0 18 4	0 4 2¼	0 7¼	11	9 2	7 4	5 6	3 8	1 10
12	1 0 0	0 4 7¼	0 8	12	10 0	8 0	6 0	4 0	2 0
13	1 1 8	0 5 0	0 8½	13	10 10	8 8	6 6	4 4	2 2
14	1 3 4	0 5 4½	0 9¼	14	11 8	9 4	7 0	4 8	2 4
15	1 5 0	0 5 9	0 10	15	12 6	10 0	7 6	5 0	2 6
16	1 6 8	0 6 1¾	0 10½	16	13 4	10 8	8 0	5 4	2 8
17	1 8 4	0 6 6¼	0 11¼	17	14 2	11 4	8 6	5 8	2 10
18	1 10 0	0 6 11	0 11¾	18	15 0	12 0	9 0	6 0	3 0
19	1 11 8	0 7 3½	1 0½	19	15 10	12 8	9 6	6 4	3 2
20	1 13 4	0 7 8	1 1¼	20	16 8	13 4	10 0	6 8	3 4
30	2 10 0	0 11 6	1 7¾	30	25 0	20 0	15 0	10 0	5 0
40	3 6 8	0 15 4½	2 2¼	40	33 4	26 8	20 0	13 4	6 8
50	4 3 4	0 19 2¾	2 9	50	41 8	33 4	25 0	16 8	8 4
60	5 0 0	1 3 0½	3 3¼	60	50 0	40 0	30 0	20 0	10 0
70	5 16 8	1 6 11	3 10	70	58 4	46 8	35 0	23 4	11 8
80	6 13 4	1 10 9	4 4½	80	66 8	53 4	40 0	26 8	13 4
90	7 10 0	1 14 7¼	4 11¼	90	75 0	60 0	45 0	30 0	15 0
100	8 6 8	1 18 5½	5 5¾	100	83 4	66 8	50 0	33 4	16 8

N.B.—If the wages be guineas instead of pounds, for each guinea add 1d. to the month, or ¼d. to the week.

Wakefulness after a Few Hours' Sleep.—Dr. Searle observes on this subject: "For the benefit of some persons who fall asleep perhaps soon after they get into bed, but wake some two or three hours afterwards, and cannot sleep again, I may say this condition may in general be remedied by getting up and eating a good-sized crust of bread-and-butter, thus engaging the nervous power in digestion and the nutritive processes, and returning afterwards to a cool bed.

Walk or Sit, How to.—Walk with the chin but slightly above the horizontal line, or with your eyes directed to things a little higher than your head.

Any one wishing to be aided in securing this habitual carriage of body, must accustom himself to carry his hands behind him, one hand grasping the opposite wrist.

To walk gracefully, the body must be erect, but not stiff, and the head held up in such a posture that the eyes are directed forward. The tendency of untaught walkers is to look towards the ground near the feet; and some persons appear always as if admiring their shoes. The eyes should not thus be cast downward, neither should the chest be bent forward to throw out the back, making what are termed round shoulders; on the contrary, the whole person must hold itself up, as if not afraid to look the world in the face, and the chest by all means be allowed to expand. At the same time every thing like strutting or pomposity must be carefully avoided. An easy, firm, and erect posture, are alone desirable. In walking it is necessary to bear in mind that the locomotion is to be performed entirely by the legs.

Awkward persons rock from side to side, helping forward each leg alternately by advancing the haunches. This is not only ungraceful but fatiguing. Let the legs alone advance, bearing up the body.

Englishmen are admired the world over for their full chests, and broad shoulders, and sturdy frames, and manly bearing. An upright position of body is a favourite with them, in the simple promenade in a garden or gallery, in attending ladies along a crowded street, or in public worship.

Many persons spend a large portion of their waking existence in the *sitting* position. A single rule, well attended to in this connection, would be of incalculable value to multitudes—use chairs with the old-fashioned straight backs, inclining backward, and sit with the lower portion of the body close against the back of the chair at the seat; any one who tries it will observe in a moment a grateful support to the whole of the spine.

And we see no reason why children should not be taught from the beginning to write, sew, and knit, in a position requiring the lower portion of the body and shoulders to touch the back of the chair all the time.

A very common position in sitting, especially among men, is with the shoulders against the chair back, with a space of several inches between the chair back and the lower part of the spine, giving the body the shape of a half hoop; it is the instantaneous, instinctive, and almost universal position assumed by any consumptive on sitting down, unless counteracted by an effort of the will; hence parents should regard such a position in their children with apprehension.

The best position after eating a regular meal is to have the hand behind the back, the head erect, in moderate locomotion, and in the open air, if the weather is not chilly. Half an hour spent in this way after meals, in early life, would add health and long life to all.

Walking and Talking.—There is one rule to be observed in taking exercise by walking—the very best form in which it can be taken by the young and the able-bodied of all ages—and that is, never to allow the action of respiration to be carried on through the mouth. The nasal passages are clearly the medium through which respiration was designed by our Creator to be carried on. "God breathed into man's nostrils the breath of life" previous to his becoming a living creature. The difference in the exhaustion of strength by a long walk, with the mouth firmly closed and respiration carried on through the nostrils instead of through the mouth, is inconceivable to those who have never tried the experiment. Indeed, this mischievous and really unnatural habit of carrying on the work of inspiration and expiration through the mouth instead of through the nasal passages is the true origin of almost all the diseases of throat and lungs—as bronchitis, congestion, asthma, and even consumption itself. That excessive perspiration to which some individuals are so liable in their sleep, which is so weakening to the body, is solely the fact of such persons sleeping with their mouths unclosed. And the same unpleasant and exhaustive results arise to the animal system from walking with the mouth open, instead of—when not engaged in conversation—preserving the lips in a state of firm but quiet compression. As the heat and velocity of the blood through the lungs depend almost entirely upon the quantity of the atmospheric air inhaled with each inspiration, and as it is unavoidable that it should be taken in, in volume, by the mouth, whilst it can only be supplied in moderate quantities, and just in sufficient proportion to serve the purpose of a healthy respiratory action whilst supplied through the nostrils, it is clear that the body must be much lighter and cooler, and the breathing much freer and easier, when the latter course rather than the former is the one adopted. Children ought never to be allowed to stand or walk with their mouths open; for, besides the vacant appearance it gives to the countenance, it is the certain precursor of coughs, colds, and sore throats.

Walking-Sticks, Curiosities of.—"The blackthorn," says the Curator of the Kew Museum, "cherry, and hazel sticks, are of course distinguishable to all;

though few persons are aware of the hundreds of work-people to whom employment is afforded at the East end of London upon the manufacture of sticks from British woods. The foreign trade in this article, moreover, represents quite a branch of art. Pimenta sticks, it seems, have of late years been much in demand. They are natives of the West Indies; but they are now outdone in favour by the myrtle stick, known by its rustic and knotty appearance, which is imported from Algeria, whence come the pomegranate and the olive. Just now, however, the most prized of all sticks are said to be the orange and lemon, which are imported from the West Indies. These, however, are very high-priced. Next to these stands the Rajah cane, grown in Borneo, which is admired for its prettiness and rigidity. The Whangee canes of China, with peculiarly regular joints, are the stems of a gigantic grass. The palm canes, which are angular, and more or less flat, are the leaf-stalks of the date-palm. A new stick, known as Eucalyptus has recently been imported from Algeria, whilst Java and Singapore, as well as India and China, also contribute their quota to the tons of walking-sticks which are constantly arriving in London. Of course there are sticks of various kinds, of less value and interest. Very pretty sticks are said to be made from the furze or gorse of our commons, and some even from the tall cabbage stalks which grow in the Channel Islands. Then there is the Malacca cane, and sticks made of rhinoceros horn, whalebone, or tortoiseshell—not to mention the German life-preserver, or the old-fashioned dirk, all of which combine to show the diverse popular tastes for the walking-stick."

Wall Fruit, To Preserve from Snails.— Scatter over the border, in front of the trees, a few cabbage leaves, greased on the under side; lift the leaves every morning, and collect the snails or slugs that may be found under them. If any of these are so small as to be troublesome to pick up, water them with lime-water, or water in which potash or soda has been dissolved.

Walls, To Colour or Paper.— If a ceiling or wall is to be whitewashed or coloured, the first thing to be done is to wash off the dirt and stains with a brush and clean water, being careful to move the brush in one direction, up and down, and not all sorts of ways, or the work will look smeary afterwards. When dry, the ceiling is ready for whitewash, which is to be made by mixing whiting and water together till quite smooth, as thick as cream. Dissolve half an ounce of glue in a teacupful of water, and stir it into the whitewash. This *size*, as it is called, prevents the white or colour rubbing off the wall, and a teacupful is enough for a gallon of wash. Stone colour is made by mixing a little yellow ochre and blue-black with the size, and then stirring it into the whitewash; yellow or red ochre are also good colours, and, with vermilion or indigo, any shade may be prepared.

If paper is to be used, the wall must be washed with clean water, as before explained, and, while wet, the old colour must be scraped off with a knife or a smooth-edged steel scraper of any sort. It will be best to wet a yard or two at a time, and then scrape.

Next wash the wall all over with size, made with an ounce of glue to a gallon of water; and when this is dry, the wall is ready for the paper. This must be cut into lengths, according to different parts of the room. On one edge the plain strip must be cut off close to the pattern, and the other left half an inch wide. If the paper is thick, it should lie a minute or two after it is pasted; but if thin, the sooner it is on the wall the better. Begin by placing the close-cut edge of the paper at one side of the window, stick it securely to meet the ceiling, let it hang straight, and then press it down lightly and regularly with a clean cloth. The close-cut edge of the next length will cover the half-inch left on the first one, and so make a neat join; and in this way you may go all round the room, and finish at the other side of the window.

Walnut Ketchup.—See *Ketchup, Walnut.*

Walnuts, An excellent Family Medicine. — Everybody eats walnuts;

everybody knows how to make a pickle of walnuts; few, however, know the medicinal value of walnuts. Now, the fact is, walnuts, when properly prepared, are an excellent medicine and alterative; and this is the way to prepare them. Get the green walnuts fit for pickling; put them in a stone jar filled up with moist sugar, in the proportion of half a pound to a score of walnuts; place the jar in a saucepan of boiling water for about three hours, taking care the water does not get in, and keep it simmering during the operation. The sugar, when dissolved, should cover the walnuts; if it does not, add more, cover it close, and in six months it will be fit for use. The older it gets the better it is. One walnut is a dose for a child of six years, as a purgative; and it has this great advantage over drugs, that whilst it is an excellent medicine, it is, at the same time, very pleasant to the palate, and will be esteemed by the young folks as a great treat. Who can say as much for salts, jalap, and other doctor's stuff?

War Chariots.—Chariots were chiefly used by the ancients in war, and were named according to the number of horses applied to draw them. Among their varieties we find frequent historical mention of the *currus falvati*, or those chariots armed with hooks or scythes, with which whole ranks of soldiers were cut off together. These were not only used by the Persians, Syrians, Egyptians, &c., but among the ancient Britons; and, notwithstanding the imperfect state of some of the most necessary arts among that nation before the invasion of the Romans (A.D. 55), it is certain that they had war chariots in great abundance. Historians describe six varieties common in Britain, including chariots or carriages designed for travelling—some with two, and others with four wheels—and the common cart or wagon, used in trade and agriculture in time of peace, and, in time of war, for carrying baggage, and the wives and children, who commonly followed the armies to battle.

Another variety was the *covinus*, or war chariot, a very terrible instrument of destruction, being armed with sharp scythes and hooks, for cutting and tearing all who were so unhappy as to come within its reach. This kind of chariot was made very slight, and had few or no men in it besides the charioteer, being designed to drive with great force and rapidity, and to do execution chiefly with its hooks and scythes. The far greater number of the British war chariots seem to have been of this kind. They had scythes affixed to the axles of the wheels; and, while the warrior hurled his javelin with one hand, with the other he shielded the charioteer or driver.

Warranty of Horses, The.—*The Field Quarterly Magazine* contains an able article by Mr. A. T. Jebb, barrister, on the law of warranty in connection with horses. He gives the following advice to those who have been deceived: "As soon as a breach of warranty is discovered, the purchaser should immediately tender the horse to the seller, and, if he refuse to take him back, sell him as soon as possible for what he will fetch. Where he is not taken back, the measure of damages will be the difference between the sum that was originally given for him and the sum he ultimately brought. The purchaser is also entitled to charge against the seller, as damage, the expenses incurred in keeping the horse for a reasonable time, until he can be properly disposed of. And so if it is advantageous for the sale of a horse to keep him at livery until a certain fair, it will be the seller's duty to provide for the charges of standing at livery."

Washing, Useful Hints on.—The most important part of domestic economy naturally includes the wash-house, into which philosophy has found its way, for the application of many useful principles and much useful practice. When water is hard, and will not readily unite with soap, it will always be proper to boil it before use, which will be found sufficiently efficacious, if the hardness depends solely upon the impregnation of lime, in the form of what modern chemistry designates as a subcarbonate. The philosophical reason for this is that the lime, by some secret process of Nature, is united to a portion of carbonic acid, which causes it to be suspended in the water; but, in the process of boiling,

the carbonic acid unites with the acquired caloric, and is carried off with it into the atmosphere. Even exposure to the atmosphere will produce this effect in a great degree upon spring water so impregnated, leaving it much fitter for lavatory purposes. In both cases the water ought to be carefully poured off from the sediment, as the neutralised lime, when freed from its extra quantity of carbonic acid, falls to the bottom by its own gravity.

Boiling, however, has no effect, when the hardness of the water proceeds from lime united with the sulphuric acid, or sulphate of lime, of chemistry; and it must be neutralised, or brought to its proper state, by the application of common wood ashes from the kitchen grate, or of soda, or pearlash, or by the more scientific process of dropping in a solution of subcarbonate of potash. Each of these unites with the sulphuric acid, and separates it from the lime, which gravitates, as in the former case, to the bottom.

Having thus philosophically explained the arcana of the washing-tub, we may offer a saving hint in order to economise the use of soap; which is, to put any quantity of pearlash into a large jar, covered from the dust; in a few days the alkali will become liquid, which must be diluted in double its quantity of soft water, with its equal quantity of new-slacked lime. Boil it half an hour, frequently stirring it, adding as much more hot water, and drawing off the liquor, when the residuum may be boiled afresh and drained, until it ceases to feel acrid to the tongue.

Much soap and much labour may also be saved by dissolving alum and chalk in bran-water, in which the linen ought to be boiled, then well rinsed out, and exposed to the usual process of bleaching. Soap may also be totally disused, or nearly so, in the getting up of muslins and chintzes, which should always be treated agreeably to the oriental manner; that is, to wash them in plain water, and then boil them in rice-water; after which they ought not to be submitted to the operation of the smoothing iron, but rubbed smooth with a polished stone. The economy which must result from these processes renders their consideration important to every private family, in addition to which we must state that the improvements in philosophy extend to the laundry as well as to the wash-house.

Wash Colours, To Prepare. —See *Maps*.

Wasps, To Destroy. — "The method I have adopted," says an eminent horticulturist, "is the old simple one of hanging bottles, partially filled with sweetened water, against the walls in the spring of the year, about the time when peaches, apricots, &c., are in bloom, before food for those noxious insects becomes plentiful, and while they are glad to seek out anything in the way of sustenance. By this means I killed, in one year, upwards of three hundred queen wasps. While other people have had more than a hundred nests to destroy, I have not had more than a dozen, though my garden is situated in the midst of plantations, where they might, almost undisturbed, increase to an alarming extent."

Watches, Care of.—Wind your watch as nearly as possible at the same hour every day. Be careful that your key is in good condition, as there is much danger of injuring the machine when the key is worn or cracked; there are more main-springs and chains broken through a jerk in winding than from any other cause. As all metals contract by cold and expand by heat, it must be manifest that to keep the watch as nearly as possible at one temperature, is a necessary piece of attention. Keep the watch as nearly as possible in one position—that is, if it hangs by day, let it hang by night against something soft. The hands of a chronometer or duplex watch should never be set backwards—in other watches this is of no consequence. The glass should never be opened in watches that set and regulate at the back. On regulating a watch, should it be fast, move the regulator a trifle towards the slow, and if going slow, do the reverse. You cannot move the regulator too slightly or too gently at a time, and the only inconvenience that can arise is, that

you may have to perform the duty more than once.

Water, Hard.—None of the waters produced by Nature are entirely pure and soft—artificially distilled water alone is so, and often then, without care and some chemical knowledge of the process, it is not free from impurities.

The waters from primitive formations, particularly from mountainous districts, are almost pure, and springs and wells on sandy plains are also—owing to the rocks and soils being wholly composed of silicious and other constituents—insoluble in water. All streams and springs in secondary or limestone countries, contain more or less materials constituting what are called hard water—and often the waters, from sudden showers which have been produced by evaporation from extensive regions of like formation, are sensibly affected.

All waters known as hard result from some of the acids or their salts being held in solution. The most common are the carbonic acid, and the carbonates, and sulphurous and chloric acids and their combinations. All the waters containing carbonic acid gas and sulphuretted hydrogen (the material that makes the sulphur springs of the country), uncombined with the earths, are rendered soft by simple boiling, as the gases are expanded by heat and thrown off, and no deposit is left—but when united with lime, alumina (clay), or the metals, boiling deposits a portion by releasing the solvent, in the form of a hard stony concretion.

The process used by washerwomen, to *cleanse* the hard water by adding lye, ashes, or potash, is a strictly correct chemical process. Acids and alkalies are antagonistic principles; one destroys or neutralises the other, and renders both inert and harmless. The sulphuretted waters are more difficult to cleanse, or purify, than any other class except the muriates (acid of common salt, now called chlorates), as they adhere to their combinations with greater tenacity.

The effect produced on hard water in washing, where soap is used, is very simple when investigated. Soap is a compound of an alkali and animal fat, or vegetable oils and resins, and when added to water containing any acid, or acidulated substance, the acid, by its chemical affinities, seizes and neutralizes the alkali of the soap, disengaging the fatty substance in the same shape it was originally, and in the worst possible shape for cleansing the person or clothing.

There is a vulgar error prevailing among the people generally, that it is dangerous to add lime to wells and cisterns, on account of its rendering the water *hard*. There is no greater fallacy among our traditionary beliefs. Lime is strictly an alkaline substance, and, as such, is a neutraliser of all the acids that water contains, and may be freely used when in a *quick* or unslacked state—old and air-slacked is hurtful, as it has become a subcarbonate. One ounce of fresh quick-lime, dissolved in water, will soften two barrels of ordinary hard water and render it fit for washing purposes. It is also advantageously used to sweeten cistern water when it becomes stagnant and of bad odour, and is the cheapest and most ready deodoriser of all unpleasant and unhealthy effluvia.

Water on Lead, Action of.—Dr. Medlock has investigated the action of different waters on lead, and the conclusions he has arrived at are, firstly, that the action is entirely due to the presence of nitrous and nitric acids, resulting primarily from the decomposition of organic matter and of ammonia contained in the water; secondly, waters deprived of these acids and of substances capable of producing them, have no action on lead, and may be conveyed with perfect safety through leaden pipes, or stored in leaden cisterns.

Water never pure in Nature.—From "Chemistry of Common Life" we extract the following:—"In nature water is never found chemically pure: that which descends in rain is contaminated by the impurities it washes out of the air; that which rises in springs, by the substances it meets with in the earth itself. In rivers the impurity of the water is frequently visible to the eye. It is often of a red colour, as it flows through rocks of red marl, which contain much oxide of iron in

their composition; it descends milky from the glaciers of Iceland and the slopes of the Andes, because of the white earth it holds in suspension; it is often grey or brown where it issues from boggy lakes, or runs across a peaty country; it is sometimes black to the eye when the quantity of vegetable matter is excessive, as in the Rio Negro of South America; and it is green in the geysers of Iceland, in the Swiss lakes, amongst the islands of the South Sea, and around our own islands, because of the yellow matters which it everywhere holds in suspension or solution. Only in clear and deep waters, like those of the Bay of Naples, and in parts of the Pacific, where minute objects may be seen on the bottom some hundreds of feet down, is the real blue colour natural to water, in large masses, distinctly perceptible.

"But among the rocky and other materials which water meets with in and upon the earth, there are many which it can dissolve as it does salt and sugar, and the presence of which cannot be detected by the sense of sight. Hence the clearest and brightest of waters—those of springs, and transparent waters, even when filtered—are never pure; they all contain in solution a greater or less quantity of saline matter, sometimes so much as to give them a decided taste, and to form what are hence called *mineral* waters.

"Among the purest natural waters hitherto examined is that of the Loka, in the north of Sweden, which flows over hard, impenetrable granite, and other rocks, upon which water produces but little impression. It contains only one-twentieth of a grain (0.0566) of solid mineral matter in the imperial gallon. The water which is supplied to the city of Edinburgh contains seven to fourteen grains in the gallon; and that of the Thames, near London, about twenty-one. These are both comparatively pure waters, and are very good for general consumption. That of the river Wear, which supplies the city of Durham, contains fifteen and a half grains in the gallon, and is still a good water for domestic use. That which is used in the town of Sunderland, and is obtained from the new red sandstone, contains twenty-seven grains in the gallon. Some of the other waters supplied to and used in London and its neighbourhood, and which are not derived from the Thames, contain—

New River Co... ..	19½	grains in the gallon.
East London Water Co.,	23½	" "
Kent Water Co. ..	29½	" "
Hampstead Water Co.,	35½ to 40	" "
Deep-bore wells ..	33 to 38	" "

Other drinking-waters contain more even than these. Some, which are in constant use, contain twice as much—even the waters of the holy Jordan contain seventy-three grains to the gallon—but generally, in the waters of average purity, which are employed for domestic purposes, there are not present more than from twenty to thirty grains of solid matter in the imperial gallon.

"Generally speaking, also, rain-water which falls in remote country districts is the purest. Then comes river-water; next the water of lakes; after these, common spring-waters, and then the water of mineral springs."

Water, Signs of Good.—The signs of good water are that it easily becomes hot and cold; that in summer it is cool, and in winter slightly lukewarm; that a drop dried on a clean cloth leaves not the faintest stain behind; and that it has neither taste nor smell. It is also a sign of good water that when it is boiled, it becomes hot, and afterwards grows cold, sooner than other water; but this sign is far more fallible than the evidence of the quality of water obtained by feeling. Singular as this may sound, it is very possible to distinguish the properties of water by means of this sense. A soft or a hard water is synonymous with a water the parts of which adhere slightly or closely together. The slighter their adhesion the less they resist the feeling, and the less sensible they are to the hand, because they may be so much the more easily separated. A gentleman known to us has for many years used two different sorts of water, which are equally pure and limpid, the one for drinking, and the other for washing his hands and face. If his servants ever happen to bring the wrong water for

washing, he instantly discovers the mistake by the feeling. Our cooks and washerwomen would be able to furnish many other instances of the faculty of discriminating the properties of water by the touch, which would show that this faculty depends more on the excitement occasioned in the sensible parts than on any other cause. Hard water, for instance, makes the skin rough; soft, on the contrary, renders it smooth. The former cannot sufficiently soften flesh or vegetables; the latter regularly produces this effect. The difference of the extraneous matters which change the qualities of water, naturally makes a different impression on the feeling, and in this there is nothing that ought to astonish a person of reflection.

Water, Simple Mode of Purifying.—It is not so generally known as it ought to be that pounded alum possesses the property of purifying water. A tablespoonful of pulverised alum sprinkled into a hogshead of water (the water stirred at the same time) will, after a few hours, by precipitating to the bottom the impure particles, so purify it that it will be found to possess nearly all the freshness and clearness of the finest spring water. A pailful, containing four gallons, may be purified by a single teaspoonful of the alum.

Water, Spring.—The original source of all spring water is rain, which, falling upon high ground, filters through the soil and the strata of the earth, so long as they are porous, until it is stopped by some impervious substance, as rock or hard clay; it will then find its way along the surface of this bed, until it arrives at some crevice or opening through which it forces its way out at the surface. Rain-water is perfectly wholesome.

Spring water is the best kind of water for drinking, when *soft*—that is to say, when it is not impregnated with much earthy salts—but when rendered *hard*, by containing saline matter in solution, it is often oppressive to weak stomachs. It even proves injurious to some of the domestic animals, when confined to its use, and is particularly disliked by horses. The hardness of water is generally derived from the presence of sulphate of lime (gypsum, or plaster of Paris), five grains of which will impart this quality to a pint of water. Hard water is well known to be unfit for brewing, making tea, washing, and other domestic purposes.

Well water is nearly the same as spring water. The more any spring or well is drawn from, the softer the water becomes.

Water-Beetles are, in general, more destructive to their fellow-creatures than any other class of water insects. They are parasitical in their habits, and will attack and devour almost anything they can overcome. Like their relatives of the land, they are enveloped in a hard case, called their *elytra*. The elytra protects their bodies, but particularly their wings, from all attack. They bite furiously with their upper jaws, which have a saw-like edge; with these they seize their prey, and masticate it at their leisure. One full-sized water-beetle will, in the course of twenty-four hours, kill and eat a small frog and two or three small-sized fishes.

One very interesting beetle amongst the tribe is the Whirligig. This little fellow is immensely fond of a dance; but, as he does not like to be observed by common eyes, he always holds his balls in deep water, and, on the least alarm, darts away into his impenetrable fortresses among the stones and weeds. But besides their natural alertness, they are provided with an invaluable safeguard in their two pairs of eyes, one of which they turn upwards, to keep watch on the land, whilst the other they use for the various necessities of their existence.

Water-Cress.—The grateful and salutary qualities of this vegetable are too well known to need description; but at certain periods of the year, when perhaps the cress is in its best state for the table, it is common for the under part of the leaves to have a white gummy substance adhering to them, which cannot be removed by washing, and small snails are also fixed on them. It may be useful to many to learn that if the cresses are put into strong brine, made with common salt and water, and suffered to remain there ten minutes, every-

thing of the animal and insect kind will be detached from the leaves, and the cresses can afterwards be washed in pure water and sent to the table. Small salads, cabbages, cauliflowers, celery, lettuces, and vegetables of all descriptions, by the same simple method, may be freed from slugs, worms, or insects. If a jar of brine is kept for the purpose, and strained after being used, it will last for many weeks, and the expense, of course, will be very trifling.

Water-Pipes, To Remove Frost from.—The following mode of preventing the water-pipes in houses from stopping up by frost or bursting from thaws, is so simple that no one who cares to save himself from the inconvenience of being without water during the prevalence of frost, should neglect to follow our plan. Have a small spherical cistern of thin copper attached to the lower part of the water-pipe, and a gas-burner fixed below it. If, when the frost comes, the gas-jet be ignited the effect will be that the cistern will become a boiler on a small scale, circulating sufficient warmth through the pipes to prevent the action of the frost either in stopping the supply or in bursting the pipes. Every household might be saved from winter's mishap by this simple mode, without the unsightly process of hay-binding their service-pipe, which is seldom effectual.

Water-Spouts.—These spouts are extremely dangerous, for no vessel coming within the vortex of the waters could possibly escape. Water-spouts are sometimes formed from the clouds alone, without communication with the sea. One that appeared in France is stated to have emitted a strong smell of sulphur, while flashes of lightning proceeded from it, also a great quantity of water. The visible portion of water-spouts varies in height from 2,000 to 6,000 feet.

Water-spouts are always attended with electrical action, and in many cases light noise and a sulphurous smell accompany them. Yet they do not affect the magnetic needle in ships, even when they actually pass the vessel. The phenomenon closely resembles, if it is not identical with, the whirlwinds, which, in arid plains and deserts, raise pillars of sand and dust of a form very similar to that which is assumed by water.

Waterproof and Fire Cement.—To half a pint of milk put an equal quantity of vinegar, in order to curdle it; then separate the curd from the whey, and mix the whey with the whites of four or five eggs, beating the whole together. When it is well mixed, add a little quick-lime through a seive, until it has acquired the consistency of thick paste. With this cement, broken vessels, and cracks of all kinds, can be mended. It dries quickly, and resists the action of fire and water.

Another excellent cement may be made in the following manner with *rice-flour*:—It is only necessary to mix the rice-flour intimately with cold water, and gently simmer it over a fire, when it readily forms a delicate and durable cement, not only answering all the purposes of common paste, but admirably adapted for joining together paper, cards, &c., in forming the various beautiful and tasteful ornaments which afford much employment and amusement to ladies. When made of the consistency of plaster-clay, models, busts, basso-relievos, &c., may be formed of it, and the articles, when dry, are susceptible of high polish, and very durable. (See *Transparent Cement.*)

Waterproof Clothing.—Undoubtedly waterproof clothing is of great use, and it must be less injurious to check perspiration, in some degree, than to get soaked with rain. There can be no doubt but waterproof fabrics may be made very light, and so formed as to be worn in wet weather, and yet allow some escape for perspiration. But still they are not healthy, and should never be put on except in cases of extreme necessity. Any person who has worn a waterproof outer garment for some time knows by experience that it causes weakness and chills. No person should wear a garment but such as allows the vapour or perspiration which is continually exuding from the skin to pass off freely. For this reason a frequent change of entire clothing conduces to health.

Waterproof Walks for Gardens.—A new and improved method of path-making has recently

come into vogue, and will soon be universally adopted for its cheapness, general excellence and permanence; in fact, when once well done, it lasts for ever. Instead of making the walk of loose material, on the old fashion, concreting is resorted to, by which the appearance of gravel is retained, with all its freshness and beauty of contrast to grass and flowers, and the walk itself is rendered as dry and durable as the best pavement. The *modus operandi* is as follows:— Procure a sufficient quantity of the best Portland cement, then, with the help of a labourer, turn up the path with a pick, and have all the old gravel screened, so as to separate the loam and surface weeds from it, and to every six parts of the gravel add three parts of *gritty* sand of any kind—but soft pit-sand is unsuitable—and one part, by measure, of Portland cement. When these are well mixed together in a dry state, add sufficient water to make the whole into a moderately stiff, workable consistence, and lay it down quickly two inches thick on a hard bottom. A common spade is the best tool with which to spread it; it must be at once spread as it is to remain for ever, and a slight convexity given to the surface. In forty-eight hours it becomes as hard as a rock; not a drop of rain will go through it; and if a drop lodges on it, blame yourself for not having made the surface even—but a very moderate fall is sufficient with such an impenetrable material. Not a weed will ever grow on a path so formed; not a worm will ever work through it; a birch-broom will keep the surface clean and bright, and, of course, it never requires rolling. It is necessary to be very particular as to the quality of the cement, for a great deal of rubbish is sold under the name of real Portland. For the flooring of a greenhouse, fowlhouse, potting-shed, or barn, this is the best and cheapest that can be had— always clean, hard, and dry, and never requiring repairs of any kind if carefully put down in the first instance. (See *Weeds on Gravel Walks.*)

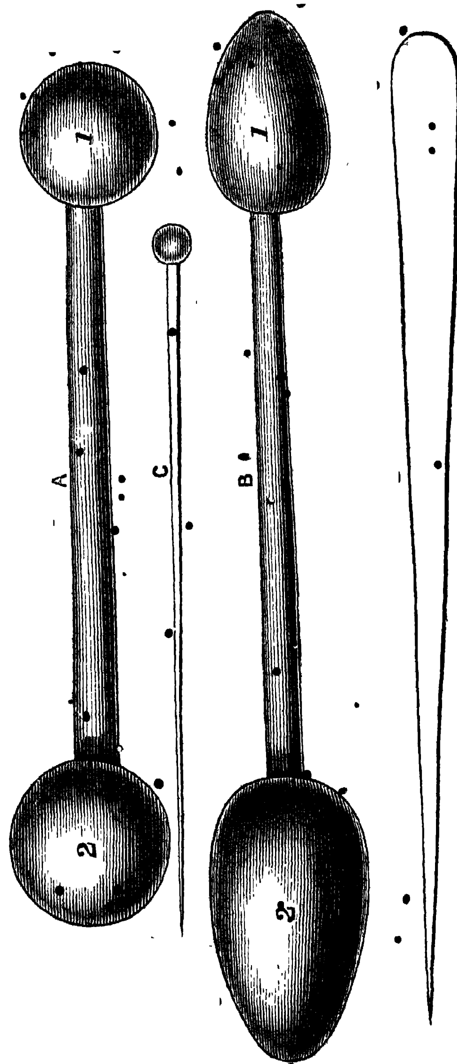
Waves, Cause of.—The friction of the wind combines with the tide in agitating the surface of the ocean, and, according to the theory of undulations, each produces its effect independently of the other. Wind, however, not only raises waves, but causes a transfer of superficial water also. Attraction between the particles of air and water, as well as the pressure of the atmosphere, brings its lower stratum into adhesive contact with the surface of the sea. If the motion of the wind be parallel to the surface, there will still be friction, though the water will be smooth as a mirror; but if it be inclined, in however small a degree, a ripple will appear. The friction raises a minute wave, whose elevation protects the water beyond it from the wind, which consequently impinges on the surface at a small angle: thus, each impulse, combining with the other, produces an undulation which continually advances.

Wax Flowers, The Art of Making and Modelling.—This elegant art for ladies will well repay a careful study of it. The following instructions will be found very clear, and cannot fail to guide all those who are desirous to learn:—

General Directions.

In the first place it is most important for the pupil to be careful in selecting the best wax, principally white, of the thicknesses Nos. 1, 2, and 3. Of colours— yellows, 1, 2, and 3; two shades of pink; and about six to seven shades of green —from the light primrose-leaf green to the deep myrtle-green. This assortment will be found quite sufficient. As it is impossible to imitate some flowers faithfully in the tinted wax, it is necessary to resort to powder colours.

Having selected the wax, the next requisite is an assortment of powder colours, in bottles: carmine, three shades of blues, viz., cobalt, French ultramarine, and Prussian; three shades of yellow (chrome 1, 2, and 3); flake white; vermilion; burnt umber; two shades of green down; a bottle of bloom; half a dozen small sable brushes; bottle of liquid transparent gall; half a dozen small saucers for the colours; a palette-knife; a fine-pointed pair of scissors; various steel pins, three sizes of wire, covered with green silk; and a bottle of



EXAMPLES OF TOOLS FOR WAX FLOWER MAKING.

gum. The tools requisite should be of boxwood.

The Component Parts of Flowers.

As it is necessary to know something of the component parts of a flower, the following concise remarks will materially assist the pupil.

In those flowers which are considered as the most perfect there are seven parts, besides the peduncle, on which the flower is supported.

1st. The calyx, or flower-cup, which is an extension of the peduncle in the form of leaves, and not differing much from common leaves in texture.

2nd. The corolla, which is formed within or above the calyx. It is of a finer texture, and often displays the most beautiful colours.

In some flowers there is only one organ, which in those cases may be considered as the calyx and corolla united together, as it has the rough texture of the one on the outside, and the delicate texture of the other within. When the corolla consists of more than one part, the parts are called petals.

3rd. The stamens, which are thread-like substances, generally bear little knobs on their points. They are ranged within the corolla, and vary in number in different flowers.

4th. The pistils, which are organs standing on the rudiments of the fruit, sometimes one and sometimes many in the same flower.

5th. The pericardium, or seed vessel; but sometimes this is wanting, in which case the plants are said to have naked seeds.

6th. The receptacle, or that on which all the other parts are united.

7th. The seed, the bringing of which to perfection, to render it fit for producing future plants, is the object of all the other parts; and when they have accomplished that, they die.

The calyx and stamens, as well as leaves, may be had all ready to hand; the former we recommend, as it saves an immense amount of time, which, devoted in making them, scarcely repays the pupil; although simple in construction, they require a great deal of preparation. The leaves, though few are needed, must be perfect in character and class, which may be purchased, very naturally done in cloth waxed over; but a knowledge of the art of modelling them is necessary, on which I have given practical instructions below.

The student should purchase the wax in sheets, ready for working, as it may be obtained from Messrs. Barnard and Son, Oxford Street, as well as the other materials required in the art, at very moderate prices—indeed, cheaper and better than any one unused to its preparation could produce it.

To Make Stamens and Pistils.

The thread-like substances that are seen in flowers are generally made of white, red, yellow, and green sewing cotton. First make the cotton stiff, either with melted gum or starch (in convenient lengths); when quite dry, dip in melted wax; then cut into the required lengths. The little knobs that are seen on their points are made by dipping the ends in thick gum, then into powder colour suited to the flower for which they are intended.

To Make Leaves.

Leaves are made by a method which differs widely from flower-making, but is sometimes adopted in making some of the larger and thickly petalled flowers —such as lilies, &c.

First, select a perfect and natural leaf, two to three sizes of a character; get a common flower-pot, pan, or any other vessel sufficiently large to admit it; fill the vessel with wet sand, place the leaf upon it, and form a rim round the leaf, about half an inch from the edge of it, with a strip of cardboard about an inch wide; pour plaster-of-paris over it (the plaster must be of the consistency of cream), till it comes level to the cardboard wall. When the plaster is set, take it up from the sand, without removing anything else; only trim round the edges of the model of the leaf, making the plaster as even as possible. Cut three or four holes with the point of your knife, in different parts of the edge of the half-mould, large enough to hold a small pea in each; then grease the edges and holes with a preparation of equal parts of tallow and salad oil, laying it on with a

brush. Place the leaf again in the half-mould, and form another rim of cardboard round this, place it in the vessel, and pour in the plaster-of-paris as before. When thoroughly set, separate the parts, take out the leaf, and you have a perfect mould of both sides of it. Before destroying the leaf, press it between two pieces of cardboard, just to get the impression of the irregularities belonging to the leaf.

The mould being now formed, take a sheet of green wax the shade required, cut it to the pattern just named as nearly as you can; the more correctly you cut it, the less trouble you will have. Soak the mould in water just warm enough to bear your hands in; when thoroughly warmed through, take it out, open the two halves, insert your wax just prepared, and squeeze them carefully together, taking care the keys (or little knobs) on the edges of the mould come into their proper sockets. This being done, and the leaf taken out, it will have all the veins and irregular markings of the real one. This example will serve as a guide in making all other leaves.

I will now give you two practical examples for making a fuchsia and a poppy.

THE FUCHSIA.

This is a most graceful and elegant flower, the varieties of which are so great that it is almost difficult to select one for imitation; if, however, the construction of one is faithfully laid down in detail for the pupil, most varieties can be made, with the difference only of tinting the curves, the adjusting or arranging of the flowers, according to the variety imitated—some being solitary flowers, others in bunches of threes and fours, with buds. The leaves are in pairs, of a darkish green, with veins of maroon or dark red; from the juncture of every leaf with the stem there comes a flower or bud, which is attached directly to the stem; the stems for the flowers and buds to be made of fine copper wire, as it is more pliable than iron wire; for the small buds and delicate sorts thread well waxed will do; the copper wire must also be well waxed, in the same manner as you would thread.

To make the flower, prepare four pieces of wax for the corolla, and four pieces for the calyx; pinch the edges of the latter very little, merely taking off the square edge caused in the cutting. Then press the body of the calyx with the thick end of the bone tool, until it is somewhat hollowed, and the neck part of it tubular, which must be done with the steel pin: the corolla cannot be too thin at the edges. Tint them purple or pink, as is required, and the calyx fine scarlet of full colour, or of very pale tints, according to the colour of the flower to be imitated. Take a thin piece of wire and colour it pink, and dip the point in melted white wax, which forms the pistil with a small knob at the end. Take eight stamens, fix them round the pistil with a little silk, then take the corolla, which must be previously curled a little, and place them so as the stamens protrude about an inch below the flower, one lapping over the other, so that they encircle each other; pinch them nicely round the base, also the calyx immediately over them; press and join the neck-parts of the flower quite smooth and round (which part will require tinting over again); and finally fix on the seed-vessel, of a dark maroon or green, as the flower may be, which is done by rolling a piece of wax to the size, a little oblong; make an incision half way through lengthways with a knife, place it against the stem of the flower; press it together neatly, and the flower is complete. The buds can be made by moulding with the fingers, according to their several growths, though they are oftentimes cast in moulds, in the same manner as waxen fruit. In mounting the leaves and flowers on the stem, join two opposite each other, the small young leaves of a reddish hue on the end of the stem; tie on the buds, commencing from the point, then the leaves over the joints, and cover that part of the stem with dark red or pale wax (as the character of the flower may require) up to the next joint; then two others near to them on the opposite sides, and so on increasing the joints as they recede from the top. And from the axille of these may be seen little buds, with stalks from

half an inch, next an inch, and so on till they attain to maturity and blooming.

THE POPPY.

This flower is a little troublesome to make, but forms a showy one in a group. The directions here given are for the Carnation Poppy. First prepare the thick wire, by fixing a piece of green wax, about the size of a large pea, to represent the seed-pod, which, in the double flower, is scarcely visible, or not at all. This being done, get the stamens, which are of thread-like form, with dark purple-colour points, which represent the anthers; fix these carefully round the seed-pod, just level with the crown. Then proceed, preparing the petals. They require no very particular accuracy, so long as you keep generally to the natural sizes and character of the patterns. After cutting out all the patterns, according to the directions given, proceed to pinch the jagged edges of each petal between the thumb and finger, until you get them pretty fine and thinly edged; as you finish this operation, and while the petals are pliable, place them into the required shape, that is, by forming rib-like marks down the petal, with the point of the bone pin, and slightly curved, with the jagged ends gracefully twisted in different ways. The four petals of the flower must be nicely cupped, which is done by placing the petal in the palm of the hand, and, with the large ball-tool, rolling round and round till it forms the segment of a circle, or concave appearance. Thus, having finished the moulding part, proceed, tinting the jagged edges either with carmine, purple, or salmon colour, or graduated with pale yellow, and tipped with carmine or purple. Take any of the tints named in powder on the saucer, and with one of the brushes dipped into the powder, brush over the edges of the petals, both sides, several times (first placing the petal on a board or table). If the tint is required to appear strong on the petal, then use a small quantity (about two or three drops) of liquid colourless gall, or a little ammonia, just sufficient to make the colour stain over the wax. After gaining the depth of tint required, proceed to form the flower, by first placing petals round the seed-pod, so that the top of the petal shall be about five-eighths at the least above the crown of the seed-pod. When the petals are placed round, they will make quite a natural finish close up to the stock, as there is no calyx shewn in this flower. Two or three of this class of flower, of different tints, placed with a group of flowers in a vase, adds much to the beauty and boldness of the group, as it is a very gracefully petalled flower, and if cultivated like the dahlia, would become a flower of equal choice and admiration.

Wealth.—Every man is rich or poor according to the proportion between his desires and his enjoyments; any enlargement of his wishes is, therefore, destructive to happiness with the diminution of possession. He who teaches another to long for what he can never obtain is no less an enemy of his quiet than if he had robbed him of patrimony. The rich lose all gratifications because their wants are prevented; and, added to the lassitude that follows satiety, they have a pride proceeding from wealth which makes them impatient at the loss of pleasure, though they have no enjoyment in the possession of it. The perfume of ten thousand roses pleases but for a moment; the pain occasioned by one of the thorns is long felt. Riches are of no value in themselves; their use is discovered only in that which they procure. They are coveted by narrow minds (which confound the means with the end) for the sake of power, influence, and respect; or by those of less elevated and refined sentiments as necessary to selfish enjoyments. Wealth cannot confer greatness, for nothing can make that great which the decree of Nature has ordained to be little. The bramble may be planted in a hotbed, but it can never become an oak. Listen to what Dr. Johnson says on this subject:—

"To purchase heaven has gold the power?
Can gold remove the mortal hour?
In life, can love be bought with gold?
Are friendship's pleasures to be sold?—
No; all that's worth a wish, a thought,
Fair virtue gives unbribed, unbought.
Cease, then, on trash thy hopes to bind,
Let nobler views engage thy mind."

Weather, Changes of, Indicated.—On the approach of rain brick floors turn damp, the sea-weed becomes flabby, the swallow flies low, the cat turns her tail to the fire, the frogs become a dusty brown, the stars shine with unusual brightness, there is no dew on the grass in the morning, the peacock screams, May-flowers close their petals, &c.; and if a storm is at hand, the sea-birds leave the coast, and fly inland. Fair weather is prognosticated by the reverse of all the above signs, and also by a ruddy sunset; a gray and misty morning at sunrise; the prevalence of cobwebs in the hedges; and especially that beautiful and mysterious production of *arachnæ*—the gossamer—which in one night is seen to cover the recently-reaped wheat-fields, as if by enchantment, with a transparent veil. Such are some of the means by which the agriculturist is enabled to make his general arrangement for the safety of his crops and flocks. But the most unerring of all appears to be found from the operations of the spider.

It is generally known that the state of the atmosphere has a visible effect upon certain animals, and that, for instance, cats, dogs, frogs, &c., have a very strong presentiment of every change which is preparing in it. It has been discovered that the spider possesses this quality in a more eminent degree than all other animals, and so is peculiarly fit to serve as an unerring barometer. These insects have two different ways of weaving their webs, by which we can know what weather we are going to have. When it inclines to turn rainy or windy, they make the principal threads which are the foundation, as it were, of their whole web, very short and rather thick; whereas they spin them much longer when fine and warm weather is to be expected. Hence it appears clearly that the spiders have not only a near, but also a distant presentiment of the changes which are preparing in the air. The barometer (which *see*) foretells the state of the weather with certainty only for about twenty-four hours, whereas we may be sure that the weather will be fine twelve or fourteen days when the spider makes the principal threads of its web long. It is obvious how important the consequences of this infallible indication of the state of the weather must be in many instances, particularly with regard to the operations of agriculture; for which reason it has been frequently lamented that the best barometers, hydrometers, and thermometers, are principally in the hands of the consumers, and very rarely in those of the planters of the harvest. 'How fortunate it is, therefore, that provident Nature, amongst other gifts, has also bestowed upon the cultivators of the country such a cheap instrument, upon the sensibility and infallibility of which, with regard to the impending changes in the atmosphere, he can rely.' Barometers are frequently very fallible guides, particularly when they point to *settled fair*; whereas the work of the spider never fails to give the most certain information. This insect, which is the most economical of animals, does not go to work nor expend such a great length of threads, which it draws out of its body, before the most perfect equilibrium of all the constituent parts of the air indicates with certainty that this great expenditure will not be made in vain.

The peculiarities of the following birds, insects, &c., also unerringly indicate changes in the weather:—

1. When bats remain longer than usual abroad from their holes and fly about in great numbers, it indicates that the following day will be warm and serene; but if they enter their houses, and send forth loud and repeated cries, it prognosticates bad weather.

2. If the owl is heard to scream during bad weather, it is an omen that it will soon become fine.

3. The croaking of crows indicates fine weather.

4. When the raven croaks three or four times, extending his wings and shaking the leaves, it is a sign of serene weather.

5. It is an indication of rain and stormy weather when ducks and geese fly backward and forward.

6. If bees do not remove from a great distance from their hives, it announces rain; if they return to their hives before

the usual time, it may be concluded that it will soon fall. On the contrary, if they fly far from their hives and return home late, they foretel very fair and hot weather.

7. If pigeons return slowly to the pigeon-house, it indicates that the succeeding day will be rainy.

8. It is a sign of rain or wind when sparrows chirp a great deal, and make a noise to each other to assemble.

9. When fowls roll in the sand, or if cocks crow at unusual times more than usual, rain may be expected.

10. Peacocks which cry during the night, have a presentiment of rain.

11. When swallows fly in such a manner as to brush the surface of the water, it is a sign of bad weather.

12. When flies sting and are more troublesome than usual, the weather is about to change for the worse.

13. When gnats collect before the setting of the sun and form a sort of vortex in the shape of a column, fine weather may be depended on. If they play up and down in the open air near sunset, they presage heat; if in the shade, warm and mild showers, but if they join in stinging those who pass by them, cold weather and much rain may be expected.

14. When aquatic birds retire to the sea-shore or marshes, it indicates a sudden storm.

15. The appearance of cranes and other birds of passage early in autumn, announces a severe winter, for it is a sign that it has already begun in the northern countries.

16. If larks rise very high, and continue to sing for a long time, or if kites fly aloft, these are indications of fine weather.

17. If frogs croak more than usual; if toads issue from their holes in the evening in great numbers; if worms come forth from the earth; if moles throw up the earth more than usual; if asses shake and agitate their ears and bray frequently; if bats send forth cries and fly into the house; if dogs roll on the ground and scratch up the earth with their fore-feet and lay on the right side; if cows or oxen look towards the heavens and turn up their nostrils as if catching some smell; if rats and mice are more restless than usual—or when animals crowd together—all these are signs which announce rain.

18. When goats and sheep are more obstinate, and more desirous to crop their pastures, and when birds return slowly to their nests, rain may be expected.

19. A beautiful insect called the clock-beetle, which flies about in the summer evenings in a circular direction, with a loud buzzing noise, is said to foretel a fine day. It was consecrated by the Egyptians to the sun.

20. *The Leech.*—Put a leech into a large phial three parts full of clean rain water, regularly change the same twice a week, and let it stand on the window frame fronting the north. In fair and frosty weather it will be motionless, and rolled up in a spiral form at the bottom of the glass; bur prior to rain or snow, it will creep to the top, where, if the rain is to be heavy, and of some continuance, it will remain a considerable time; if trifling, it will descend. Should the rain or snow be accompanied with wind, it will dart about its habitation with an amazing celerity, and seldom cease until it begins to blow hard. If a storm of thunder or lightning be approaching, it will be exceedingly agitated, and express its feelings in violent convulsive starts at the top of the glass. It is remarkable, that however fine and serene the weather may be, and not the least indication of a change, either from the sky, the barometer, or any other cause whatever, yet if the leech ever shifts its position, or moves in a desultory manner, the coincident results will certainly occur within thirty-six hours.

21. In men, frequently, aches, pains, wounds, and corns, are more troublesome, either towards frost or rain.

22. Persons of a plethoric habit of body are frequently oppressed with drowsiness or heavy sleep before rain falls.

Weather, English Proverbs on.—

If red the sun begins his race,
Expect that rain will fall apace.

The evening red and the morning grey
Are surest signs of a fine day.

If woolly fleeces spread the heavenly way,
No rain, be sure, disturbs the summer day.
In the waning of the moon,
A cloudy morn—fair afternoon.
When clouds appear like rocks and towers,
The earth's refreshed by frequent showers.

Weather, Gloomy, To Prevent the Depression of.—The best thing is to defend the skin from chill and damp by proper clothing, and to seize every favourable glimpse of sunshine and dry weather to be out of doors. The power of electricity over the body is well known; indeed, we can never enjoy health or comfort without a proper portion of it in the system. When this portion is deficient we feel languid, heavy, and low-spirited, and we very foolishly pronounce a libel on the blood, which is quite innocent, while we never suspect the damp atmosphere of robbing us of our electricity. Yet, so it is. In dry weather, whether it be warm, dry or frosty, we feel light and spirited; because dry air is a slow conductor of electricity, and leaves us to enjoy its luxuries. In moist or rainy weather, we feel oppressed and drowsy; because all moisture greedily obsorbs our electricity, which is the buoyant cordial of the body. To remedy this inconvenience, we have only to discover a good non-conductor of electricity to prevent its escape from the body; and this we have in silk, which is so excellent a non-conductor that the thunderbolt, or the forked lightning itself, could not pass through the thinnest silk handkerchief, provided always that it be quite dry. Those, therefore, who are apt to become low-spirited and listless in damp weather, will find silk waistcoats, drawers and stockings, the most powerful of all cordials.

Weather, Hot, Hints for.—The numerous fatalities that attend hot weather, make it important to guard ourselves against it as much as possible, and the following hints will be found useful:—

From 6 to 11 a.m. are the favourite hours of work in India, and many of us may, with great comfort and advantage, adopt them here, and those who can conveniently do so, should, and allow those under them to do the same.

Children should be allowed to sleep during the day, and should take their exercise only in the morning and evening. This caution may be usefully applied at the watering-places, by those who congregate thither in the hot weather.

Heat begets thirst, but it is well to remember that alcoholic liquors and high feeding are great aids of the burning sun in producing sunstroke.

Light wines, plentifully diluted, and aerated waters, are the suitable drinks for summer temperature; sulphuric acid lemonade is at once refreshing and an excellent remedy for diarrhœa.

Colour is not nearly so efficacious in diminishing the discomfort of clothing as material; and a good large silk umbrella will save anyone from sunstroke, and all from suffering when exposed of necessity to the rays of the sun.

Houses should be kept shut during the heat of the day, and the windows or blinds wetted. In this way, any room may be kept comparatively cool, especially those exposed to the rays of the sun.

Dr. Elliston expressed an opinion that the English custom of drinking beer, often of a very inferior quality, in the harvest fields, is fraught with much danger.

The great physiological rule for the preservation of health in hot weather is to keep the body cool. Acid drinks are the most wholesome, and are moreover cheap. In the evening there can be no objection to beer for those who prefer it, but in the hottest part of the day it produces too much feverishness, and should not be indulged in by any one.

A flat vessel filled with water, on which are floated branches of trees covered with green leaves, is a very pleasant and efficacious means to subdue heat, and is much employed in Germany. The suspension of Indian matting, previously damped, at the open window, tends much to diminish the heat. This matting may be imitated by any kind of plaited grass.

Weather, Table for Foretelling the.—This table has been compiled by Dr. Herschell, and corrected by the late Dr. Adam Clarke. It is the result of many years' actual observations, the

whole being constructed on a due consideration of the attraction of the sun and moon, in their several positions respecting the earth. By simple inspection it will show the observer what kind of weather will most probably follow the entrance of the moon into any of its quarters, and that so near the truth as to be seldom or never found to fail. These remarks also apply to the following observations:—

If the new, first quarter, full moon, or last quarter, happens,	IN SUMMER.	IN WINTER.
Between midnight and 2 in the morning.	Fair	Hard frost, unless the wind be S. or W.
Between 2 and 4 A.M.	Cold with frequent showers	Snowy and stormy
—— 4 and 6 "	Rain	Rain
—— 6 and 8 "	Wind and rain	Stormy
—— 8 and 10 "	Changeable	Cold rain, if wind be W.; snow if E.
—— 10 and 12 "	Frequent showers	Cold and high wind
At 12 noon & 2 P.M.	Very rainy	Snow or rain
Between 2 and 4 "	Changeable	Fair and mild
—— 4 and 6 "	Fair	Fair
—— 6 and 8 "	Fair, if wind N.W. Rainy, if S. or S.W.	Fair and frosty, if the wind be N. or N.E. Rain or snow if S. or S.W.
—— 8 and 10 "	Ditto	Ditto
—— 10 and 12 "	Fair	Fair and frosty

5. The moon's change, first quarter, full, and last quarter, happening during six of the afternoon hours, *i.e.*, from four to ten, may be followed by fair weather, but this is mostly dependent on the *wind*, as is noted in the table.

6. Though the weather, from a variety of irregular causes, is more uncertain in the latter part of autumn, the whole of winter, and the beginning of spring, yet, in the main, the above observations will apply to those periods also.

7. To prognosticate correctly, especially in those cases where the *wind* is concerned, the oberver should be within sight of a good *vane*, where the four cardinal points of the heavens are correctly placed.

Observations.—1. The nearer the moon's changes—first quarter, full, and last quarter—are to *midnight*, the fairer will it be during the next seven days.

2. The space for this calculation occupies from ten at night till two next morning.

3. The nearer to *mid-day* or *noon* the phases of the moon happen, the more foul or wet weather may be expected during the next seven days.

4. The space for this calculation occupies from ten in the forenoon to two in the afternoon. These observations refer principally to the summer, though they affect spring and autumn nearly in the same ratio.

From Admiral Fitzroy's "Weather Book" we are told to observe the following indications for prognostication of the weather:—

It should always be remembered that the state of the air *foretels coming* weather, rather than indicates weather that is *present* (an invaluable fact too often overlooked); that the longer the time between the signs and the change foretold by them, the longer such altered weather will last; and, on the contrary, the less the time between the warning and a change, the shorter will be the continuance of such predicted weather.

If a barometer has been about its ordinary height, and is *steady*, or rising—while the thermometer falls, and dampness becomes less — north-westerly,

northerly, or north-easterly wind, or less wind, less rain or snow may be expected. On the contrary, if a fall takes place, with a rising thermometer and increased dampness, wind and rain may be expected from the south-eastward, southward, or south-westward. In winter a considerable fall, with rather low thermometer, foretels snow. Exceptions to these rules occur.

The most dangerous shifts of wind, or the *heaviest* northerly gales, happen *soon* after the barometer *first* rises from a very low point; or, if the wind veers *gradually*, at some short time afterwards, although with a *rising* glass.

Indications of approaching change of weather, and the direction and force of winds, are shown much less by the height of the barometer than by its falling or rising.

A rapid rise of the barometer indicates unsettled weather; a slow movement of some duration, the *contrary*; as likewise a *steady* barometer, which, when continued, and with dryness, foretels very fine weather, lasting for some time.

A rapid and considerable fall is a sign of stormy weather and rain (or snow). Alternate rising and sinking, or oscillation, always indicates unsettled and disagreeable weather.

Another remarkable peculiarity is—that the wind usually *appears* to veer, shift, or go round *with the sun* (right-handed, or from left to right), and that when it does not do so, or backs, *more* wind or bad weather may be expected, instead of improvement, after a short interval.

A barometer begins to rise considerably before the conclusion of a gale, sometimes even at its commencement. Before and during the *earlier* part of settled weather it usually stands high, and is stationary, the air being dry.

Instances of fine weather with a low glass occur, however rarely, but they are always preludes to a *duration* of wind or rain.

Whether clear or cloudy, a rosy sky at sunset presages fine weather; a sickly-looking *greenish* hue, wind and rain; a dark (or *Indian*) red, rain; a red sky in the morning, bad weather or much wind (perhaps rain); a grey sky in the morning, fine weather; a high dawn, wind; a low dawn, fair weather. A "high dawn" is when the first indications of daylight are seen above a bank of clouds. A "low dawn" is when the day breaks on or near the horizon, the first streaks of light being very low down.

Soft-looking or delicate clouds foretel fine weather, with moderate or light breezes; hard-edged, oily-looking clouds, wind. A dark, gloomy blue sky is windy, but a light, bright blue sky indicates fine weather. Generally, the *softer* clouds look, the less wind (but perhaps more rain) may be expected; and the harder, more "greasy," rolled, tufted, or ragged, the stronger the coming wind will prove. Also, a bright yellow sky at sunset presages wind, a pale yellow, wet; therefore by the prevalence and kind of red, yellow, or other tints, the coming weather may be foretold very nearly; indeed, if aided by instruments, almost exactly.

Small inky-looking clouds foretel rain; light scud clouds, driving across heavy masses, show wind and rain; but if alone, may indicate wind only.

High upper clouds crossing the sun, moon, or stars, in a direction different from that of the lower clouds, or the wind then felt below, foretel a change of wind *towards their direction.*

After fine clear weather, the first signs in the sky of a coming change, are usually light streaks, curls, wisps, or mottled patches of white distant clouds, which increase, and are followed by an overcasting of murky vapour that grows into cloudiness. This appearance, more or less oily or watery, as wind or rain will prevail, is an infallible sign.

Light, delicate, quiet tints or colours, with soft, undefined forms of clouds, indicate and accompany fine weather; but unusual or gaudy hues, with hard, definitely-outlined clouds, foretel rain, and probably strong wind.

Misty clouds forming, or hanging on heights show wind and rain coming, if they remain, increase, or descend; if they rise or disperse, the weather will improve, or become fine.

More than usual twinkling of the

stars, indistinctness or apparent multiplication of the moon's horns, haloes, fragments of pieces, as it were, of rainbows, and the rainbow itself, are more significant of increasing wind, if not approaching rain, with or without wind.

Weather Wisdom.—

If Candlemas day be bright and fair,
It will sooner or later rain here or there;
If Candlemas day be dark and foul,
Expect fine weather at times ere Yule;
If the storm-cock sing on Lady Day,
Some showers will fall 'twixt then and May;
On Easter eve if skies do frown,
The sheep will graze on the southern down;
At Whitsuntide when the hawthorn's white,
Ere Midsummer dew will fall at night;
At Michaelmas if the wind be high,
Look for thunder and lightning before July;
And when the moon you cannot see,
Where, thereafter, may it be.

Wedding, Words for a.—Do not run much from home. One's own hearth is of more worth than gold. Many a marriage begins like a rosy morning, and then falls away like a snow-wreath. And why? Because the married pair neglect to be as well-pleasing to each other after marriage as before. Endeavour always to please one another, but at the same time keep God in your thoughts. Lavish not all your love on to-day, for remember that marriage has its to-morrow likewise, and its day after to-morrow too. Consider what the word "wife" expresses. The married woman is the husband's domestic faith; in her hand he must be able to trust the key of his heart as well as the key of his eating-room. His honour and his home are under her safe keeping, his well-being in her hand. Think of this! And you, sons, be faithful husbands, and good fathers of families. Act so that your wives shall esteem and love you.

Wedding-Cake.—The following is an excellent recipe for making a wedding-cake:—One pound of flour, nine eggs (the whites and yolks beaten separately), one pound of butter beaten to a cream, one pound of brown sugar, one teacup of molasses, nutmegs grated or ground mace one ounce, one teaspoonful each of ground allspice and cinnamon, and a gill of brandy; mix and beat this mixture well. Having picked, washed, and dried three pounds of currants, stoned and cut in two three pounds of raisins, strew half a pound of flour over them; mix it well through, and stir them with a pound of citron, cut in strips, into the cake. Line round "tin" pans with buttered paper; put the mixture in an inch and a half or two inches deep, and bake in a moderate oven an hour and a half or two hours. This cake may be iced as follows:—Beat the whites of two small eggs to a high froth; then add to them a quarter of a pound of white sugar, ground fine, like flour; flavour with lemon extract or vanilla; beat it until it is light, and very white; the longer it is beaten the more firm it will become. No more sugar, however, must be added to make it so. Beat the frosting until it may be spread smoothly on the cake. This quantity will ice quite a large cake over the top and sides.

Wedding Nosegays.—See *Nosegays*.

Wedding-Ring, The Poetry and History of.—As the marriage-ring exhibits nothing to imply the pre-eminence of one party over the other, notwithstanding that the word *obey* is applied to the lady rather than the gentleman, yet the latter should ever recollect that, as in "forensic courts," especially courts of *equity*, the plaintiff must appear with what are called "clean hands," in other words, must have fully done *his* part and duty; so, before the husband can claim any *right* to command, or the wife be under any obligation to *obey*, he must remember the test of his love and sincerity, which is given in the Holy Scriptures, namely, "Husbands love your wives, as Christ loved the Church." But how did Christ *prove* His love to the Church?—By dying for it. When a love, of which this is the model, predominates in the husband's heart, he can require no obedience from his wife but what she will ever feel it to be her honour, pride, privilege, and delight to render.

When a bride "reads, marks, learns, and inwardly digests" the foregoing, with all implied suggestions and endearments, and then glances at the honoured finger which bears the pure insignia of such voluminous delights and serious responsibilities, how inexpressibly must

she feel that she can, at all times, and under all circumstances, be the bearer of so dear and portable a pledge of what constitutes real terrestrial felicity, and may she often recur to the title or motto, and "think well on it!"

"This is love, and worth commending,
Still beginning, never ending."

Marriage is honourable to all.

"They were so truly *one*, that none could say,
Whether did rule, or whether did obey;
He ruled, because *she* would obeying be;
She, thus obeying, ruled as well as *he*."

Another poet (Davison) thus writes of the wedding-ring:—

"If you would *know* the love which you I bear,
Compare it to the ring which your fair hand
Shall make *more* precious, when *you* shall it wear;
So *my love's* nature you shall understand.
Is it of metal pure? So endless is *my* love,
Unless you destroy it with *your* disdain.
Doth it the purer grow the more 'tis tried!
So doth my love, yet herein they dissent:
That whereas gold, the more 'tis purified,
By growing less, doth show some part is spent,
My love doth grow more pure by your more trying,
And yet increaseth in the purifying."

Gifts of rings by *lovers* have always been common. It is comforting, however, when the *husband* can look to the past, to the present, to the future, with sentiments like those embraced in the following lines in connection with the gift of a ring:—

"'Thee, Mary, with this gift I wed,'
So sixteen years ago I said.
Behold another ring—for what?
To wed thee o'er again—why not?
With that first ring I married youth,
Grace, beauty, innocence, and truth,
Taste long admired, sense long revered,
And all my Mary then appeared.
If she by merit since disclosed,
Prove twice the woman I supposed,
I plead that double merit now,
To justify a double vow.
Here, then, to-day (with fault as sure,
With ardour as intense and pure,
As when amidst the rites divine,
I took thy troth, and plighted mine)—
To thee, sweet girl, my second ring,
A token and a pledge I bring:
With this I wed, till death us part,
Thy riper virtues to my heart;
Those virtues which, before untried,
The wife has added to the bride;
Those virtues whose progressive claim,
Endearing wedlock's very name,
My soul enjoys, my song approves,
For conscience sake as well as love's.
For why?—They show me hour by hour
Heaven's high thought, affection's power,
Discretion's deed, sound judgment's sentence,
And teach me all things—but repentance.

Dr. Dreunan thus apostrophises the wedding-ring as an emblem of bliss:—

Emblem of happiness! not bought, nor sold;
Accept this modest ring of virgin gold.
Love in this small, but perfect, circle trace,
And duty in its soft, but strict embrace.
Plain, precious, pure, as best becomes the wife;
Yet firm to bear the frequent rubs of life.
Connubial life disdains a fragile toy,
Which rust can tarnish, and a touch destroy;
Nor much admires what courts the general gaze,
The dazzling diamond's meretricious blaze,
That hides, with glare, the anguish of a heart,
By nature hard, but polish'd bright by art.
More to thy taste the ornament that shows
Domestic bliss, and, without glaring, glows,
Whose gentle pressure serves to keep the mind
To *all* correct; to *one* discreetly kind—
Of simple elegance the unconscious charm;
The holy amulet to keep from harm.
To guard at once and consecrate the shrine—
Take this dear pledge! it makes and keeps thee mine.

Wedding-rings were not always worn plain as now, but at one time more nearly resembled modern betrothal tokens in being chased, set with stones and inscribed with emblems and mottoes. The ring is used in all ceremonies of Christian marriage, except in the Society of Friends; but even many Quaker ladies wear a wedding-ring after, although it is not employed *during*, the marriage ceremony.

There is no trace of this custom in the Talmud, nor in ancient Jewish history; but the modern Jews have not only adopted the wedding-ring, but make it a most important feature in their marriage service. According to the ordinances of modern Judaism, it is required to be of a certain value.

In the English church a ring is absolutely necessary to the ceremony, but, as no metal is specified, silver, copper, or iron is as allowable as gold.

In Ireland the same ring may be used for many marriage ceremonies, which ring remains in the custody of the priest.

The old writers on the subject of wedding-rings delight in finding mystical reasons for every part of the marriage

ceremony, and not content with repeating the ancient superstition respecting the left hand, they declare, in addition, that this hand was chosen, as inferior to the right, in token of the servitude and subjection into which the bride is brought to matrimony. Dr. Johnson appears to have held a similar opinion, since he somewhere defines a ring as "a circular instrument placed upon the noses of hogs, and the fingers of women, to restrain them, and bring them into subjection."

In Swinburn's "Treatise of Espousals" we read: "The first inventor of the wedding-ring, as is reported, was one Prometheus. The workman who made it was Tubal-Cain, who, by the counsel of our first parent, Adam, gave it unto his son to this end, that *therewith* he should espouse a wife, like as Abraham delivered unto his servants bracelets and earrings of gold." The form of the ring being circular, and without end, which importeth this much, that their mutual love and hearty affection should roundly flow from the one to the other, as in a circle, and that continually and for ever.

Marriages are recorded to have been celebrated without the ring, and a key substituted for it; and sometimes a ring of leather cut transversely from a finger of the bridegroom's glove. These, though, were generally for hurried and clandestine marriages, when there had been no time or thought for the ring.

Respecting the substitution of the church key for the wedding-ring, we know some one who was assured by an aged inhabitant of a rural parish not a hundred miles from Colchester, that, as late as twenty-five years ago a marriage was celebrated in the parish church with the key instead of the ring. The clerk of the said parish testified to the above, and gave an instance of a party that came to the church and requested *to be married* with the church key. It was what is called "a parish wedding;" and the parochial authorities, though willing to pay the church fees, because "they were glad to get rid of the girl," had not felt disposed to furnish the wedding-ring. The clerk stated, however, that feeling some hesitation as to the substitution of the church key in his *own* church, he stepped into the house close by, and they borrowed an old *curtain*-ring, with which the marriage was solemnized. The beautiful Miss Gunning was married to the Duke of Hamilton with a curtain-ring.

Weeds on Gravel Walks, How to Destroy.—Any manufacturing chemist will be glad to supply the residuum from the manufacture of ether at one halfpenny per pound. Mix six parts water with one part of this material in a glazed earthen vessel, then let two persons be employed, the one to pour the liquid from an earthen jug over the weedy walk, the other to well rub it in with a worn-out broom or scrubbing-brush; no watering-pan to be used, or it would destroy it in an hour. Care, too, must be taken that it does not fall upon the clothes or hands, as the acid is extremely powerful. The weeds die almost immediately, nor will any for a long period spring again. It also utterly destroys the dwarf green moss, which is so apt to grow on walls in damp, shady places. Walks operated upon twice a-year in this way will effectually be kept clean and neat at a very slight cost. Care should be taken not to apply it within two inches of the edge of the lawn, lest it should destroy the grass.

To keep down weeds in gardens and walks requires patience and industry. Old Tasser counsels—

"In May, get a weed-hook, a crotch, and a glove,
And weed out such weeds as the corn doth not love;
For weeding of winter corn, now is the best,
But June is the better for weeding the rest.
The May-weed doth burn, and the thistle doth fret,
The fitches put downward both rye and the wheat;
The brake and the cockle be noisesome too much,
Yet, like unto Boodle, no weed there is such.
Slack never thy weeding for dearth nor for cheap,
The corn shall reward it ere ever ye reap."

Weeds, The Cost of Growing.—Each plant of common groundsel produces 2,080 seeds; of dandelion, 2,700; of sow thistle, 11,040; and of spinge,

540; total, 16,360 plants springing from four weeds annually, which will cover just about three acres and a half of land at three feet apart. To hoe land costs, say, six shillings per acre, so that the allowing four such weeds to produce their seed may involve the expense of a guinea. In other words, a man throws away four shillings and threepence a time as often as he neglects to bend his back to pull up a young weed before it begins to fulfil the first law of nature.

Week, Origin of the Days of the.—1. *Sunday.*—This day was called, by our Saxon ancestors, *Sunnan-Dæg*, or sun's day, because it was dedicated to the worship of the sun. The idol of the sun was represented as "a halfe-naked man set upon a pillar; his face, as it were, brightened with gleames of fire, and holding, with both his armes stretched out, a burning wheele upon his breast; the wheele being to signifie the course which he runneth about the world, and the fiery gleames and brightness, the light and heat wherewith he warmeth and comforteth the things that live and grow." The Romans called this day *Dies Solis.* Sunday, among Christians, has three denominations: the Sabbath, from its beginning the day of rest; the Lord's day, from its having been selected by the apostles as their peculiar time of meeting "to offer up their praises and thanksgivings for the inestimable benefits bestowed upon mankind, through Jesus Christ our Lord;" and lastly, and most commonly, it is called Sunday, in compliance with the long-used and ordinary form of speech.

2. *Monday*, termed *Monan-Dæg* by the Saxons, was dedicated to the worship of the moon. "The form of this idoll seemeth very strange and ridiculous, for, being made for a woman, shee hath a short coat like a man: but more strange it is to see her hood with such two long ears. The holding of a moone before her breast may seem to have been to expresse what she is; but the reason of her chapron with long ears, as also of her short coat, and pyked shoes, I doe not finde." By the Romans this day was called *Dies Lunæ*, being dedicated to the moon.

3. *Tuesday*, so named from *Tuysco*, the most ancient god of the Germans. He was "the father and conductor of the Germans, who, after his name, even unto this day, doe in their owne tongue call themselves *Tuytsh*, and their country of Germany *Tuytshland;* and the Netherlands using the D for the J, doe make it *Duytsh*, and *Duytshland*, both which appellations of the people and country I doe here write right, according as we in our English orthography would write them after their pronunciation." The Romans named this day *Dies Martis*, from its being dedicated to Mars.

4. *Wednesday*, a contraction of *Woden's* or *Odin's* day. "Odin (says Dr. Henry) is believed to have been the name of the one true god among the first colonies who came from the east, and peopled Germany and Scandinavia, and among their posterity for several ages. But at length, a mighty conqueror, the leader of a new army of adventurers from the east, over-ran the north of Europe, erected a great empire, assumed the name of Odin, and claimed the honours which had been formerly paid to that deity. From thenceforward that deified mortal, under the name of Odin or Woden, became the chief object of the idolatrous worship of the Saxons and Danes in this island, as well as of many other nations. Having been a mighty and successful warrior, he was believed to be the god of war, who gave victory, and revived courage in the conflict. Having civilized, in some measure, the countries which he conquered, and introduced arts formerly unknown, he was also worshipped as the god of arts and artists. In a word, to this Odin his deluded worshippers impiously ascribed all the attributes which belong only to the true God; to him they built magnificent temples, offered many sacrifices, and consecrated the fourth day of the week, which is still called by his name in England, and in all other countries where he was formerly worshipped. Notwithstanding this, the founders of the whole of the kingdoms of the Anglo-Saxon Heptarchy pretended to be descended from Woden, and some of them at the distance only of a few generations."

The Romans dedicated this day to Mercury, from which cause it was named *Dies Mercurii.*

5. *Thursday*, from *Thor's-Dæg*, or the Thunderer's day. It was dedicated by the northern nations to the worship of Thor, the bravest of the sons of Odin. "The idol Thor was not only served and sacrificed unto of the ancient Pagan Saxons, but of all the Teutonick people of the Septentrionall regions, yea even of the people that dwelt beyond Thule or Island; for in Greeneland was he knowne, and adored; in memory whereof a promontory, or high poynt of land lying out into the sea at the said promontory, doth yet bear his name; and the manner how he was made, his picture doth declare. This great reputed god, being of more estimation than many of the rest of the like sort, though of as little worth as any of the meanest of that rabble, was majestically placed in a very large and spacious hall, and there set as if he had reposed himselfe upon a covered bed. On his head he wore a crown of gold, and round in a compass above, and about the same, were set or fixed twelve bright burnished golden starres. And in his right hand he held a kingly sceptre. He was of the deluded pagans believed to be of most marvellous power and might; yea, and that there were no people throughout the whole world that were not subjected unto him, and did not owe him divine honour and service. That there was no puissance comparable to his. His dominion of all others farthest extending itselfe, both in heaven and earth. That in the aire he governed the winds, and the cloudes; and being displeased, did cause lightning, thunder, and tempest, with excessive raine, haile, and all ill weather: but being well-pleased, by the adoration, sacrifice, and service of his suppliants, he then bestowed upon them most faire and seasonable weather; and caused corne abundantly to growe, as all sorts of fruits, &c., and kept away the plague, and all other evill and infectious diseases. —Of the weekly day which was dedicated unto his peculiar service, we yet retaine the name of Thursday, the which the Danes and Swedians doe yet call Thors-day. In the Netherlands it is called *Dunders-dagh*, which being written according to our English orthography, is *Thunders-day*, whereby it may appeare that they antiently therein intended the day of the God of *Thunder;* and in some of our old Saxon bookes I find it to have been written *Thunres-Dæg:* so as it seemeth that the name of *Thor*, or *Thur*, was abbreviated of *Thunre*, which we now write *Thunder.*" This day was named *Dies Jovis*, Jove's Day, by the Romans.

6. *Friday* was so named in honour of *Friga*, the wife of Odin; this goddess was the reputed giver of peace and plenty. The Romans dedicated Friday to Venus, whence its name of *Dies Veneris;* and that goddess having possessed many of the attributes for which Friga was most celebrated, several authors have supposed them originally to have meant the same divinity.

7. *Saturday*, or *Seater-Dæg*, so named from the idol *Seater* worshipped by our Saxon ancestors. "He was leane of visage, having long haire, and a long beard; and was bare-headed and bare-footed. In his left hand he held up a wheele, and in his right he carried a paile of water, wherein were flowers and fruites.—His long coate was girded unto him with a towel of white linnen.—His standing on the sharpe finns of a fish (the pearch) was to signifie, that the Saxons, for their serving him, should passe stedfastly, and without harme in dangerous and difficult places.—By the wheele was betokened the knit unity and conjoined concord of the Saxons, and their concurring together in the running one course. By the girdle, which with the wind streamed from him, was signified the Saxons' freedom.—By the paile with the flowers and fruites, was declared, that, with kindly raine he would nourish the earth, to bring forth such fruites and flowers." The seventh day was dedicated by the Romans to Saturn, and named, in honour of him, *Dies Saturnii.*

Week's Work, A.—

SUNDAY—Church doors enter in,
Rest from toil, repent of sin,
Strive a heavenly rest to win.

Monday—To your calling go;
Serve the Lord, love friend and foe;
To the tempter answer, "No."
Tuesday—Do what good you can;
Live in peace with God and man;
Remember life is but a span.
Wednesday—Give away and earn;
Teach some truth, some good thing learn;
Joyfully good for ill return.
Thursday—Build your house upon
Christ, the mighty Corner-stone;
Whom God helps, his work is done.
Friday—For the truth be strong;
Own your fault if in the wrong,
Put a bridle on your tongue.
Saturday—Thank God and sing,
Tribute to His treasure bring;
Be prepared for Terror's King!
Thus your hopes on Jesus cast,
Thus let all your weeks be passed,
And you shall be saved at last.

Weights and Measures, Apothecaries'.—The following tables show the weights and measures used by apothecaries, which are those, of course, which should also regulate the practice of every one who undertakes to prescribe for the sick.

Weights.

The pound	contains	12	ounces.
ounce	,,	8	drachms.
drachm	,,	3	scruples.
scruple	,,	20	grains.

The grain weights are marked exclusive of the stamp upon them, with a particular impression for each grain. The scruple and drachm are marked with the above corresponding impressions.

Measure of Fluids.

The gallon	contains	8	pints.
pint	,,	16	fluid drachms.
fluid ounce	,,	8	,, ,,
,, drachm	,,	60	minims.

Avoirdupois Weight.

27 11/32 grains	= 1 dram	=	27 11/32 grains.
16 drams	= 1 ounce	=	437½ ,,
16 ounces	= 1 pound	=	7000 ,,
28 pounds	= 1 quarter.		
4 quarters	= 1 cwt.	=	112 lbs.
20 cwt.	= 1 ton	=	2240 ,,

This weight is used in almost all commercial transactions, and in the common dealings of life.

A firkin of butter	... ...	56 lbs.
,, soap	... ...	64 ,,
A barrel of anchovies	...	30
,, soap	... ...	256 ,,
,, raisins	... ...	112 ,,
A fother of lead	... ...	19½ cwt.

Weights and Scales, Importance of, to a Household.—It is strange that wives, taking such pains to buy the necessaries of life in the very cheapest markets, should be so *lax* in checking the *quantities* they pay for. However humble may be the household, or however mean the expenditure, weights and scales should always be at hand, to see that you have got what you have paid for. Tradespeople, we are confident, take great advantage of this dangerous trust confided to them. They know their unsuspecting customer has no means of discovering the *small* deficiencies in her tea, sugar, coffee, and the host of other articles that are purchased of the grocers, chandlers, bakers, and butchers. In the full belief that many shopkeepers make a practice of defrauding the purchaser of his weight, we say that the first step in rigid housekeeping should be the possession of weights and scales, without which no one is secure from daily fraud. There is yet another evil involved in this unaccountable negligence; children and servants soon discover that you are unprovided with the means of detecting shortness in weight, and are thereby tempted to pilfer their mistresses and mothers, either by eating or giving away a portion of that they have been sent for, or buying less than money has been given them for. Every effort should be made to provide homes with these useful articles, and when once you have got them, *do not omit to use them.* Bear this in mind, that any one who is prepared to defend himself is not so likely to be attacked. When tradesmen know that their customers weigh all articles purchased, for their credit's sake they will use only just weights and measures.

Welsh Rarebit, A First-rate.—Cut your cheese into small slips, if soft; if hard, grate it down. Have ready a spirit-of-wine lamp, and a deep block-tin dish; put in the cheese with a lump

of butter, and set it over the lamp. Have ready the yolk of an egg whipped, with half a glass of Madeira, and as much ale or beer; stir your cheese, when melted, till it is thoroughly mixed with the butter, then add gradually the egg and wine. Keep stirring till it forms a smooth mass. Season with cayenne pepper and grated nutmeg. To be eaten with hot toast. If, in travelling, you want to get this up in a hurry, do thus:—Take two soup plates, separate them from each other by pieces of cork placed on the rim of the lower one. Put the cheese, &c., in the top one, whiskey or spirits of wine in the lower one, and set it on fire. It is first-rate. It may be made in a saucepan, if you cannot procure anything else.

Westminster, The Great Clock of.—The clock is so contrived that the first blow of the hour is always struck exactly at the sixtieth second of the sixtieth minute of the hour, the hammer being kept lifted and ready to fall the moment it is let go by a fast-moving "snail," or piece of the clock, and not merely by the slow motion of the hour-wheel as usual. The quarters of the hour are made to strike a little before the hour, so as to be finished in time for the hour striking to begin at the exact time. But the first, second, and third quarters begin to strike exactly at those times. One of the conditions proposed by the Astronomer Royal, long before the work was undertaken, was, that it should not vary more than a second a day in the striking of the first blow of the hour. And this was pronounced quite impracticable in a large clock, by the Company of Clockmakers in London in a memorial presented to the Government. Persons unacquainted with horology imagine that a great clock like this need only be a small one enlarged; and large clocks used to be made on that principle. But that is quite erroneous. The friction of the machinery of small clocks is insignificant, and nearly invariable, so long as they are kept tolerably clean; but the friction of such heavy machinery as must be used in large clocks is very great, and constantly varying, from dust, and damp, and other causes; and, besides that, the action of wind, and sometimes snow, upon the hands affects the clock even more than the internal friction.

Wheat Flour, Efficacy of, in Scalds and Burns.—The relief afforded in these cases is generally the result of the exclusion of air from the exposed surface. The modern practice of covering burns with wheat flour, *or other farinaceous material*, will be found by far the most immediate in its action, and the most successful in its results; and this application is adapted to *every species* of scalds and burns, whether occasioned by scalding or actual fire; whether superficial or deep, recent or old. In the most desperate burns, where the injury is extensive, and the destruction of the skin serious, the flour is to be applied all over the injured surface until the air is entirely excluded; the pain will then almost cease, and the patient will experience comparative comfort. The flour should be repeatedly applied, until the inflammation is removed, or, in simple language, "the fire is out." No other application of dressing will be necessary until the acute stage is past. Medical aid should be obtained to conduct the healing process, and to guard against possible evils arising from exhaustion or shock.

Whiting.—As an article of diet this fish is very tender and delicate; it possesses these qualities in a greater degree than any other fish which our coasts afford: hence it has been called "the chicken of the sea." Whiting is not very nutritive, but it produces no stimulating action on the stomach; and not being oily or viscid, is easily digested, and therefore well suited to delicate stomachs, and to patients labouring under various complaints, in which the daily use of even the least exciting meat might prove injurious. Physicians know the advantage of varying the diet of invalids, and of those convalescent from acute diseases: and hence, when the use of the mildest animal food is admissible, they frequently order whiting and chicken to be taken at dinner on alternate days, followed by a little sago pudding, or some other mild article of farinaceous aliment.

White Wine Whey.—Boil half a pint of new milk; as soon as it boils up, pour in as much white wine as will turn, and make it look clear; boil it up, set the saucepan aside till the curd subsides, and do not stir it. Pour the whey off, and add to it half-a-pint of boiling water and a bit of white sugar. The whey will thus be cleared of milky particles, and may be made as weak as you choose. Cheese whey is a very wholesome drink, particularly if the cows have fresh herbage. Whey may be made of vinegar or lemon; and when clear, diluted with boiling water and a little sugar. This is less heating than wine, and if required to excite perspiration, answers quite as well.

Whitsun Day.—This festival of the Church is so-called from this day being one of the stated times for baptism in the ancient Church, when those who were baptized put on *white* garments, as types of that spiritual purity they received in baptism. The day is designed to commemorate the descent of the Holy Spirit upon the Apostles on the day of Pentecost. Whit-Sunday, Monday, and Tuesday, these three days together, are called Whitsuntide, and fall six weeks after Easter, which festival regulates all the others in matter of time.

In Catholic countries, on this day, while the people are assembled in church, pigeons are suspended above; and wafers, cakes, oak-leaves, and other things are made to shower down upon the altar—all this as a dramatic representation of the miracle.

Wills and Letters of Adminstration.—

£.		£.	Wills. £.	Administrations. £.
If 100	and under	200	2	3
200	”	300	5	8
300	”	450	8	11
450	”	600	11	15
600	”	800	15	22
800	”	1000	20	30
1000	”	1500	30	45
1500	”	2000	40	60
2000	”	3000	50	75
3000	”	4000	60	90
4000	”	5000	80	120
5000	”	6000	100	150
If 6000	and under	7000	120	180
7000	”	8000	140	210
8000	”	9000	160	240
9000	”	10,000	180	270

LEGACIES (VALUE £20 OR MORE).

	Per Cent.		
Husbands or widows, no legacy duty.			
Fathers and mothers ...	£1	0	0
To children or their descendants	1	0	0
To brother or sister, or their descendants	3	0	0
To uncle or aunt, or their descendants	5	0	0
To great uncle or aunt, or their descendants ...	6	0	0
To all other relations, or to strangers	10	0	0

Property left to the husband or wife of a relative pays only the duty chargeable to such relative.

"Will-o'-the-Wisp," and "Jack-'o-Lantern."—If two or three small lumps of phosphuret of lime be put into a tumbler three parts full of water, a decomposition will take place, and phosphuretted hydrogen gas be produced, bubbles of which will rise to the surface, when they immediately take fire and explode, terminating in beautiful ringlets of smoke. This is the same kind of gas which is generated at the bottom of shallow pools of stagnant water, in boggy and marshy places. It becomes ignited by contact with the air, and is called *Ignis Fatuus*, Will-o'-the Wisp, and Jack-o'-Lantern. From the similitude to the wavering of a lighted straw, or to the moving light of a lantern, it has received the two latter names. As the meteors are gaseous, and exceedingly transient, they have been used metaphorically to represent the illusive visions of fanatics, &c.

Window-Gardening.—A capital imitation garden may be obtained in the following manner—a manner, be it observed, especially suitable for town-houses:—From a window with a sunny aspect let a broad ledge be built out, or the window-sill and the sides may be glazed, so as to form a

kind of recess, with a sloping roof, the size of the window, so contrived that it can be raised or lowered. The whole extends to about the height of the lower sash. By shutting down the window this recess can be shut off from the room, which is sometimes necessary, as from the carbonic acid they evolve, it is rather injurious to keep plants in the room during summer and autumn nights. On the other hand, during severe weather they should be sheltered by a few yards of canvas, arranged to fall like an awning over the plant recess, and capable of being drawn up and down like a venetian blind. It will also be necessary sometimes to guard the plants from the full glare of the noon-day sun. Round this glass receptacle, which will represent a miniature conservatory or greenhouse, two or three moveable shelves should be arranged, and on these the pots containing the young growing plants are to be placed, in which creepers and flowering plants may be easily cultivated. Light and air are the two great requisites of plants; therefore, the plan we propose should be followed with such modifications as the nature of the situation of your plant-house will admit. Here geraniums, calceolarias, and other flowers may be planted by layers, runners, cuttings, or suckers, just as in the conservatory.

As they increase in size, window plants require removing into larger pots; and, whenever you see the leaves turning yellow, you may be sure they are suffering either from want of air, light, earth, or moisture. Judicious watering is a point of great importance. Let the plant have sufficient, but not too much water. Never allow the earth to get quite dry, and be equally careful not to soak them, by allowing the pots to stand in saucers of water. By a little care and attention you may have plants growing all the year, summer and winter alike. Many marsh plants, such as the forget-me-not and the African lily, should be abundantly supplied with water; care being taken that the water is about the same temperature as the atmosphere.

Due attention should also be paid to the temperature of your plant-house. Of course it will partake of the temperature of the room, but the degree of warmth may be regulated by keeping the window open or shut, to keep up or cut off the communication with the room, opening the roof, replacing the canvas cover, and so on.

The great points to be attended to are these:—Exclude damp, take care there is proper ventilation, and keep your shrubs and flowers free from decayed leaves and insects. In the winter time the water should be very slightly warmed. Care must also be taken to keep the leaves of the plants perfectly clean and free from dust, as directed in the article *Care of Plants in Rooms*, page 225.

Flowering bulbs, and other plants, should be so managed as to secure a good succession of buds and flowers; while climbers can be trained in festoons, or allowed to hang in baskets from the roof and side. You may also improve the look of your window-garden by the cultivation of bulbs in water-glasses. Narcissus, hyacinth, early dwarf tulip, jonquil, the large Dutch and the common iris, the Persian and dwarf Scotch crocus, and other flowers of like character, are very suitable for these purposes. Suitable glasses, of a dark colour, may be procured at almost any glass shop. Between October and March they may be filled with water, and the bulbs placed in their open mouth. Rain or soft water is best; and it must be allowed to reach through the neck of the glass into the upper part, so that the bottom of the bulb is just touched by the water. Then place the glasses in such a position as will ensure them a sufficiency of light and air. And then, with a little attention, the window-garden may be made a "thing of beauty," if not exactly a "joy for ever." (See *Camellias*.)

Winds, Average Annual Prevalence of.—From an average of ten years of the register kept by order of the Royal Society, it appears that at London the winds blow in the following order:—

Winds.			Days.
South-west	...	...	112
South-east	...	...	32
North-east	...	...	58
North-west	...	...	50
West	...	...	53
East	...	...	26
South	...	...	18
North	...	...	16
			365

It appears from the same register, that the south-west wind blows, on an average, more frequently than any other wind, during every month of the year, and that it blows longest in July and August; that the north-east blows most constantly during January, March, April, May, and June, and that seldom during February, July, September and December; and that the north-west wind blows oftener from November to March, and less frequently during September and October than any other months.

Winds, The Effects of Various.—The force of the wind as well as the direction of the current, or point of the compass from which the air blows, are circumstances not undeserving notice. The force or rapidity of the wind materially modifies the effects of temperature upon the system, as all of us sensibly experience. Captain Parry mentions, in the account of his arctic expedition, that, with the thermometer twenty degrees below zero, his men could go about freely when the air was calm; but, with a wind, they dared not venture to move from the ship when the thermometer was twenty or more degrees higher, the effect was so chilling. The cause of this is obvious: the cold particles of the air, being brought in such rapid succession into contact with the body, the latter is deprived of its heat faster than it is generated—like a person putting on a constant succession of cold shirts, instead of continuing in one, which soon becomes warm.

The influence of particular winds, or currents of air, must necessarily bear reference to each particular place or locality, with reference to surrounding, and often very distant causes—malarious impregnation and blight, as well as insects, sand, and ashes, being known to be thus carried to incredible distances.

An easterly wind to us in England is, in general, cold and dry, and, in the spring, insalubrious and blighty, from the great extent of continent over which it has passed, and the malarious exhalations and other terrestrial emanations it has imbibed in sweeping across the marshes of the low countries, which lie in its direction. The wind from the west is pure, and, when not too humid from the vapour of the Atlantic (which it is too apt to be in our western counties—and hence the relaxing character of the climate of Cornwall and South Devon), it is soft, balmy, and congenial to health. The wind from the arctic region is cold and bleak. That from the south, on the other hand, is in general dry, and warm too, occasionally.

Wine, Apple.—Put sixty pounds of common brown sugar into fifteen gallons of pure cider as it runs from the press, and let it dissolve; then put the mixture into a clean barrel, and fill the barrel up to within two gallons of being full with clean cider; put the cask in a cool place, leaving the bung out forty-eight hours, then put in the bung with a small vent until fermentation wholly ceases, and bung up tight, and, in one year, the wine will be fit for use. This wine requires no racking; the longer it stands upon the lees the better.

Wine, Hints to Purchasers of.—Those who are in the habit of purchasing wine at auctions or through the medium of advertisements will find the following cautions, by Mr. Cyrus Redding extremely useful:—

Beware of any wine publicly recommended as an "exceedingly fine description."

Beware of wine named after noted vintages long passed, which is generally a clap-trap, the genuine wines being all before secured for years in private stocks.

Beware of wines asserted to be made in England from imported grapes, as some pretend that they succeed in doing The grapes from which the best wines are made can scarcely be removed to

the vat from the vineyard, in grape countries, from ripeness, much less bear a land journey and a voyage.

Beware of exchange wines, wine-hawkers, and such like. The wines of France may come to us from Oporto, and be declared port wines. Madeira and sherry are imitated in the French departments of the south, and may now easily pass for one class of those wines here.

Beware of buying wines abroad of a wet summer vintage.

Beware of buying wines the acid state of which is temporarily concealed by chalk or other substances used for that purpose. Here again the merchant of integrity is the only safeguard.

Beware in buying sweet wines that counterfeits are not purchased. It is true that these are less in demand than dry wines, and therefore their adulteration is so much less an object. Tent, Cyprus, Syracuse, Laurel, Constantia, and similar wines, are all counterfeited, or second-class wines are continually sold for first-class.

Beware how you even buy good wine at the vintage time, when travelling abroad, unless the grower will undertake to manage for you in the wood for a certain time; and never buy of small growers.

Beware of alloys if you have wines in wood, especially red wines. The white wines of the south of Europe are far more enduring, and with them it is of far less importance; but sherry, Madeira, Marsala, and sweet wines are still to be attended to in this matter.

Beware of placing casks in such a situation that they cannot be examined all over, for fear of a decayed stave.

Beware of treating all wines alike in the cellar. Delicate wines require much more care than those which are coarse or strong. The appearance of a fungus or mouldiness about the bung should be the signal for a careful examination of the wine.

Beware of keeping wine too long on the lees, for fear of the secondary fermentation. It should be soon racked after its arrival. This of course has no relation to wine purchased at home, for the merchant will take due care of its treatment before he delivers it.

Beware of warming a cellar in which there are red wines. Artificial warmth need not be had recourse to except where southern wines are present, and these would occupy a separate cellar from the red.

Wine-Drinking.—A worse habit cannot be conceived than a slavish obedience to custom, when the price of such servility is personal discomfort or risk to health. With regard to drinking wine, when asked in society, prudence will dictate how far you may comply; beyond this it is mere folly to venture. Mr. Redding justly observes:—"The chief art in drinking wine is to keep within those salutary limits which mark the beneficial from the pernicious. In good society, in the present day, this line is well defined; but a man must mingle, in this distempered life, with every class, and the difficulty is to keep the mean in those cases where others have no regard for it. This is best done by studying self-respect, and the art of saying 'No,' when the necessity for saying 'No' is strongly felt. The courage to do this, and that absence of all fear of being accounted singular—which it is a man's duty to cultivate, if he wish to be thought worthy of his species—will prevent his suffering in stomach or character from that table-complaisance which the too pliant force upon themselves contrary to their better feelings."

Wines, British.—Take black, red, and white currants, ripe black-heart cherries, and raspberries; if the black currants be most abundant, so much the better. Take four pounds of the mixed fruit well bruised; put in one gallon of clear soft water; steep three days and nights in an open vessel, frequently stirring it up; then strain through a hair-sieve. The remaining pulp press to dryness; put both liquids together, and to each gallon of the whole put three pounds of Jamaica or white sugar. Let the whole stand three days and three nights, frequently stirring up as before, after skimming the top. Turn it into casks; and let it remain full, working at the bung-hole, for a fortnight. Then,

to every gallon, put one quart of good brandy, and bung closely. Ripe gooseberry wine may advantageously be mixed with the above, but it must be made separately.

Winter Cress.—This is a very useful herb, the young leaves being a principal ingredient in salads, more or less, all the year round. It may be cultivated either as an annual, biennial, or perennial. In taste it is very nearly like the common mustard; it has a hot and biting nature. About half an ounce of seed sown thinly in a bed will produce a good supply. For a winter supply it should be sown in a rich, light soil in September, and in March and April for the summer. As a breakfast herb it will be found most agreeable and wholesome.

Winter Culture of the Mignonette.—Few flowers are more esteemed for bouquets in winter and early spring than the sweet-scented mignonette (*Reseda odorata*); it is also very useful for the decoration of rooms at those seasons of the year. Although the mignonette is not a delicate plant, yet it is not generally seen in the perfection to which it might be brought by the simple method of culture here described. To flower at, or soon after Christmas, the seed should be sown in the beginning of August, in pots of any convenient size. The soil should be good loam, moderately enriched with rotten dung, and kept open by a pretty liberal intermixture with old mortar or lime rubbish. It is essential that the pots be thoroughly drained, and upon the drainage a handful (more or less, according to the size of the pots) of one-year-old pigeon's dung should be placed. After sowing the seed, set the pots where they will not require frequent waterings, too much moisture being extremely injurious to mignonette; for this reason, therefore, it will be safer to place the pots in a frame or pit, where they may be covered by the lights in rainy weather. As the plants increase in size they should be gradually thinned, ultimately leaving three or five in each pot. The principal point to be attended to now is judicious watering; by this is meant giving water only when the plants really require water, and then in sufficient quantity to moisten the whole of the soil—not dribbling a few drops over the plants to-day to prevent them from being dry to-morrow—a practice too much followed with plants in pots. Pinch off any premature flowers that may appear, keep the pots free from weeds, and far enough asunder to prevent the plants from being crowded, and when they are removed to winter quarters, set them near the glass in an airy situation. A few of the plants might be placed in an intermediate house, or other situation, rather warmer than a green-house, to come into bloom a little earlier than the rest.

Winter Evening Amusement.—At a party, the other evening, we were much pleased with what seemed to us a new arrangement of an old game. One great advantage is that it requires no pencils or paper, and may, therefore, be played in the twilight. A word is chosen and each person is requested to quote a remark (prose or verse) in which the chosen word occurs. As, for instance, the word fixed on might be *life*. The first person would, perhaps, repeat from Shakespeare, "The web of our *life* is of a mingled yarn, good and ill together." The next, "The trials of *life* are the tests which ascertain how much gold is in it." Another—

"Not by appointment do we meet delight
And joy. They need not our expectancy;
But round some corner, in the streets of *life*,
They, on a sudden, clasp us with a smile."

Again, "Most of the shadows that cross our path through *life* are caused by our standing in our own light." A fifth might say, "The charm of London *life* is that you are never glad or sorry for ten minutes together; in the country, you are one or other for weeks." Or, "Four things come not back: the spoken word, the sped arrow, the past *life*, and the neglected opportunity."

Winter Evenings' Employment.—The winter evenings comprehend a large and invaluable portion of our time, upon the proper improvement of which depends, in a very great degree, the intellectual and moral improvement and happiness of

individuals and families. These evening hours, on many accounts, are the best of our earthly existence. Gathered around the cheerful fire, the world shut out, the gleaming lights dispensing their animating beams upon the family group, conversation flows with unwonted freedom, the pleasant tale is told and listened to with vivid interest; reading from a good book is heard with attention and profit; and in a well-managed household, while the members of the family are generally engaged in light but useful employments, some one may profitably entertain the rest; or all may engage in agreeable interchange of thought and feeling, tending to bind more closely the ties of affection.

It is wonderful how much may be done to open, enlarge, and improve the mind and heart of a household through the medium of a book, read and commented upon while the family are collected around the fireside on a long winter evening. Suppose a family seated after tea, and while the mother and daughter are engaged in some light and ordinary employment, an intelligent boy takes down a new book which was brought to him to-day by his father, and commences reading aloud. The first two or three pages contain an interesting chapter of history, ancient or modern; next comes a touching moral story; then a beautiful little poem; then a chapter of travels; after that some information in geography, astronomy, or some other of the sciences, or a description of some curious trade or difficult art; and thus to the end of the book, article after article, each giving some new, valuable, and pleasing instruction.

Surely an hour spent in this way will not only pass agreeably, but all will be benefited; they will be improved by the exercise; probably every member of such a family will know something he did not know before, and even without much advantage of school education, the children of this family would grow up to be intelligent, refined, and respectable members of society. We throw out these suggestions for the benefit of the families into which our volume may find admission.

Winter Salad, A.—

"Two large potatoes, passed through kitchen
sieve,
Unwonted softness to the salad give;
Of *mordant* mustard add a single spoon,
Distrust the condiment which bites so soon;
But deem it not, thou man of herbs, a fault
To add a double quantity of salt;
Three times the spoon with oil of Lucca crown,
And once with vinegar procured from town.
True flavour needs it, and your poet begs
The pounded yellow of two well-boiled eggs.
Let onion atoms lurk within the bowl,
And, scarce infected, animate the whole.
And, lastly, on the favoured compound toss,
A magic teaspoon of anchovy sauce.
Then, though green turtle fail, though veni-
son's tough,
And ham and turkey are not boiled enough,
Serenely full, the epicure may say:
'Fate cannot harm me, I have dined to-day.'"

Winters in Olden Time.—In 1664 the cold was so intense that the Thames was covered with ice 61 inches thick. Almost all the birds perished.

In 1693 the cold was so excessive that the famished wolves entered Vienna, and attacked beasts, and even men.

In 1709 occurred that famous winter, called, by distinction, "The Cold Winter." All the rivers and lakes were frozen, and even the sea for several miles from the shores. The ground was frozen nine feet deep. Birds and beasts were struck dead in the fields, and men perished by thousands in their houses. In the south of France the wine plantations were almost destroyed, nor have they yet recovered that fatal disaster. The Adriatic Sea was frozen, and even the Mediterranean about Genoa; and the citron and orange groves suffered extremely in the finest parts of Italy.

In 1716 the winter was so intense that people travelled across the straits from Copenhagen to the province of Servia, in Sweden.

In 1729, in Scotland, multitudes of cattle and sheep were buried in the snow.

In 1740 the winter was scarcely inferior to that of 1709. The snow lay 10 feet deep in Spain and Portugal. The Zuyder Zee was frozen over, and thousands of people went across it; and the lakes in England froze.

In 1744 the winter was very cold. Snow fell in Portugal to the depth of 23 feet on a level.

In 1754 and 1755 the winters were very severe and cold. In England the strongest ale, exposed to the air in a glass, was covered with ice one-eighth of an inch thick.

In 1771 the Elbe was frozen to the bottom.

In 1776 the Danube bore ice five feet thick below Vienna. Vast numbers of the feathered and finny tribes perished.

The winters of 1774 and 1775 were uncommonly severe. The Little Belt was frozen over.

From 1809 to 1812, also, the winters were remarkably cold, particularly the latter in Russia, which proved so disastrous to the French army.

Wisdom.—Swift truly says—"Wisdom is a fox, who, after long hunting, will at last cost you the pain to dig out; it is a cheese, which by how much the richer, has the thicker, the homelier, and the coarser the coat, and whereof, to a judicious palate, the maggots are best. It is a sack posset, wherein the deeper you go, you'll find it the sweeter. Wisdom is a hen, whose cackling we must consider, because it is attended with an egg. But lastly, it is a nut, which, unless you choose with judgment, may cost you a tooth and pay you with nothing but a worm."

Wise Sayings.—Keep good company or none.

Never be idle.

If your hands cannot be usefully employed, attend to the cultivation of your mind.

Always speak the truth.

Make few promises.

Live up to your engagements.

Keep your own secrets, if you have any.

When you speak to a person, look him in the face.

Good company and good conversation are the very sinews of virtue.

Good character is above all things else.

Your character cannot be essentially injured except by your own acts.

If any one speak evil of you, let your life be so that none will believe him.

Ever live, misfortune excepted, within your income.

Make no haste to be rich if you would prosper.

Small and steady gains give competency with tranquillity of mind.

Never play at any kind of game of chance.

Avoid temptation, through fear you may not withstand it.

Earn money before you spend it.

Never run in debt unless you see a way to get out again.

Never borrow if you can possibly avoid it.

Never speak evil of any one. (See *Proverbs*.)

Wives.—See *Husbands, Advice to.*

Wolf, Game of.—One of the company must stand in the middle of the room, and relate an anecdote about wolves: whenever he mentions the *wolf* in his tale *he* must howl—when the word *wolves*, the whole of the company must howl with him; if any neglect to do so, wolf may sit down, and the non-howlers must take his place. One must continue the tale, or begin a new one; but those standing with him must howl when he mentions *wolf*, while those sitting down must not join in till *wolves* are mentioned as before.

Woman, a Sulky.—Sulkiness, if you be not blind, should be avoided by all means. A sulky man is bad enough; what, then, must be a sulky woman, and that woman a wife, a constant inmate, a companion day and night. Only think of the delight of sitting at the table for a week, and not exchanging a word all the while! Very bad to be scolding for such a length of time, but this is far preferable to the sulks. If you have your eyes, and look sharp, you will discover symptoms of this, if it unhappily exists. She will at some time or other show it towards one or other of the family, or perhaps towards yourself; and you may be quite sure that in this respect, marriage will not mend. Sulkiness arises from capricious displeasure, not founded in reason. The party takes offence unjustifiably—is unable to frame a complaint, and therefore, expresses displeasure by silence. The remedy for it is to let it take its full swing; but it is

better not to have the disease in your house; and to be married to it, is little short of madness.

Womankind, The "Talmud" on.—The Jewish Talmud has these sentences about women: "A good wife is Heaven's noblest gift. A housewife never allows herself to be disturbed from her work; even while conversing, she is busily spinning. An old, experienced woman in a household is an ornament to it like a pearl. He who lives in an unmarried state knows no joys, none of the blessings of home, and is without support. The man who stands at the deathbed of his wife feels like those who saw the temple of Jerusalem reduced to ashes: for the wife is the temple in which each man finds repose and quiet, where he rests after the labours of the day, and where he can give expression to his feelings, joyful and mournful. God has given to woman more ability of judging correctly than to man."

Women, Advice to Young.—

"Even in the happiest choice, where favouring Heaven
Has equal love and easy fortune given,
Think not, the husband gain'd, that all is done,
The prize of happiness must still be won;
And oft the careless find it to their cost,
The lover in the husband may be lost;
The graces might alone his heart allure,
They and the virtues meeting must secure.
Let e'en your prudence wear the pleasing dress
Of care for him, and anxious tenderness.
From kind concern about his weal or woe
Let each domestic duty seem to flow.
The household sceptre, if he bid you bear,
Make it your pride his servant to appear.
Endearing thus the common acts of life,
The mistress still shall charm him in the wife;
And wrinkled age shall unobserved come on,
Before his eye perceives one beauty gone;
Even o'er your cold and ever-sacred urn
His constant flame shall unextinguish'd burn."

Women and Proverbs.—It is a remarkable and painful fact, the universal want of gallantry and truth manifested in the proverbs of all languages towards the female sex:—"Woman's beauty, the forest echo, and the rainbow soon pass away," say the Germans, who further uncivilly attest that women and maidens must be praised, whether truly or falsely;" "Women are watches that keep bad time," and that "A woman's vengeance knows no bounds." The Italians are not quite so insulting as this, but their hints are almost as strong as the Teutonic assertions:—"Women always speak the truth, but not the whole truth," say the southern moralists, adding that "Women rouge that they may not blush." Then come the slandering Portuguese grinders of maxims, which they deliver according to this bad measure:—"Your wife and sheep early at home," and "Women and glass are always in danger." The haughty Spaniard states that "Women, wind, and fortune soon change." Douglas Jerrold, on the other hand, rather compliments the sex when he lays down his maxim in "St. Cupid," that, "to fan treason into a full blaze, always fan with a petticoat." How different are all these aspersions from what the great Milton wrote of the excellence of women:—

"Oh, fairest of creation! last and best
Of all God's works! creature in whom excell'd
Whatever can to sight or thought be form'd—
Holy, divine, good, amiable, or sweet!"

Women, Duties of.—As the peculiar office of man is to govern and defend society, that of woman is to spread virtue, affection, and gentleness through it; she has a direct interest in softening and humanising the other sex. Man is too rugged to be even just towards those whom he only loves, but does not respect; he is too powerful to be swayed by those whom he only respects, but does not love. The empire of woman must be won, not solely through his sense of justice, but by the grace and delicacy, the tenderness and purity she diffuses through life; but her rights will neither add dignity to her social influence, nor bring practical security to her domestic station, except as they are found really to promote the virtue and happiness of society.

Women, Married, Obligations of.—A woman increases, by marriage, her family ties and relationships. These give her new friendships to cultivate and cement with esteem and affection, while those previously formed are still to be preserved and maintained. This is by no means an unimportant point of attention; for the happiness of many a married couple has been materially affected by injudicious conduct towards both new and old connections.

Jealousies, and petty family feuds, spring from this source and diminish the respectability, as well as the comfort, of domestic life; to avert them needs only the exercise of good sense and good temper.

The mistress of a family, too, has the power, generally, of being the spring of its movements, and the regulator of its habits. Exerting this power properly, she sees around her every one obedient to the laws of order and regularity. The laborious parts of household occupations are all performed without unnecessary pressure, and the consequent comfort is felt by the whole family.

Another point of duty which usually devolves on a married woman, and which demands the constant exercise of judgment and prudence, is the expenditure of that portion of income allotted to household exigencies. Here judgment should direct and determine her to a just division of that sum between luxuries and essentials; prudence should secure her adherence to that division, and should regulate all the minutiæ of her expenditure. Extravagance and inattention to this branch of domestic management would be destructive of the comfort of every family, and, perhaps, fatal to its prosperity.

The married woman has also obligations of society to discharge, which may be said to extend beyond the bounds of family connections and relationship; she has to cultivate suitable acquaintances; to be social, friendly, and charitable according to her means.

The married woman has also duties to herself to perform. These regard the government of herself in temper; in subjecting her mind and her affections to her reason; in restraining and correcting propensities and habits prejudicial to the happiness of married life; in the disposal of her time, the improvement of her mental powers, the cultivation of morality, and the duties of religion.

Of all these social, domestic, and personal obligations, her husband is the centre; when they are properly discharged, his welfare and happiness are certainly promoted, and his esteem, affection, and confidence established on a permanent basis. In neglecting them he is neglected, his respectability diminished, and his domestic peace and comfort destroyed.

Those whose station and affluence enable them to command the service of others in household cares, are not to be commended if they toil through the duties their servants ought to perform. In doing this, they are led to neglect the more varied and extensive claims which are attached to their sphere of life, and thereby to diminish their place in society. There can be no doubt, however, that home should contain the strongest affections of the wife and parent, and should be the seat of her vigilance and cares.

Above all things, the married woman should beware of negligence in her personal appearance. She is deserving of censure if her aim to please her husband be less than that which she exercised to secure him as her lover. That effort which was an act of inclination before her marriage, she should consider as a point of duty afterwards; nor should inattention to anything agreeable to him give rise to the mortifying suspicion that the desire to please him is not so impelling a principle of action as he had perhaps flattered himself it might always have been. Few husbands are indifferent to the personal appearance of their wives; and still fewer there are who do not regard negligence in dress with even more disgust than it perhaps deserves; though when it arrives at its most aggravated state of slovenliness and want of cleanliness, it becomes a vice, and can scarcely be too much contemned. When this is perceptible in a wife, it needs no augury to foretel the approach of want of order and regularity in her family, and the loss of the esteem and the affection of her husband. (See *Dress*.)

In pourtraying the *beau ideal* of a married woman, we should describe one not absorbed in any single part, but attentive to the whole of life's obligations; one who neglects nothing; who regulates and superintends her household concerns; attends to, watches over, and guides her children, and yet is ever ready to consider, in moderation, the demands upon her time which the various and numerous claims of society may make.

Such appears to us to be a right sketch of the character of the married woman.

Women's Dress.—The real truth about fashions is that, until women—pretty women, and a good many of them—acquire more independence of character and judgment, the servile imitation of pert and confident Folly will continue. Some fashionable Parisian *modiste*, aided by some disreputable patroness, starts a new style of costume, and it is at once adopted by the French capital, soon to invade ours in turn. How is it likely that it should be resisted when all that we can show against it is some other fashion equally preposterous, which everybody is abusing, and of which everybody is growing tired? Just as there is nothing beautiful in fashions, so can there be nothing permanent. When every woman has arrived at that pitch of good sense that, abetted by those who love her and those whom she loves, she gets herself up in the manner most suited to her particular height, form, colour, expression, and occupations, and adheres to that, irrespective of all other considerations, this fashionable folly will soon be at an end. Till then, one nail will but drive out another, and on Folly's head will follies accumulate.

Wood, Mahogany Stain for.—1. Linseed oil, 2 lbs.; alkanet, 3 oz.; heat them together, and macerate for six hours; then add resin, 2 oz.; bees' wax, 2 oz. Boiled oil may be advantageously used instead of the linseed oil. 2. Brazil wood (ground); water sufficient; add a little alum and potash; boil. 3. Logwood, 1 part; water, 4 parts; make a decoction, and apply it to the wood. When dry, give it two or three coats of the following varnish:—dragon's blood, 1 part; spirits of wine, 20 parts; mix.

Woods.—See *Mahogany*.

Woods, To Stain in Various Colours.—Staining is the art of applying the varied colours furnished to us by Nature, or created by human skill, to hard bodies, such as alabaster, bone, glass, horn, ivory, marble, stone, wood, &c.; and many experimentalists have included paper and parchment. When the stains for *wood* are required to be very strong, it is better to soak and *not* brush them; therefore, if for inlaying or fine work, the wood should be previously split or sawed into proper thicknesses; and when directed to be brushed several times over with the stains, it should be allowed to dry between each coating. When it is desired to render any of the stains more durable and beautiful, the work should be well rubbed with Dutch or common rushes after it is coloured, and then varnished with three coats of shellac varnish.

With these preliminary remarks we will now call the reader's attention to the process of staining:—

Black.—1. Drop a little sulphuric acid into a small quantity of water; brush over the wood, and hold to the fire. It will be a fine black, and receive a good polish. 2. Take ½ gal. vinegar; 1 oz. bruised nut-galls; of logwood chips and copperas, each ½ lb.—boil well; add ½ oz. tincture of sesquichloride of iron (formerly called the muriated tincture); and brush on hot. 3. Use the stain given for ships' guns. 4. Take ½ gal. vinegar; ½ lb. dry lamp-black, and 3 lbs. iron-rust, sifted—mix, and let it stand for a week. Lay three coats of this on hot, and then rub with linseed oil, and you will have a fine deep black. 5. Add to the above stain 1 oz. nut-galls, ½ lb. logwood chips, and ¼ lb. copperas; lay on three coats, oil well, and you will have a black stain that will stand any kind of weather, and one that is well suited for ships' combings, &c. 6. Take 1 lb. logwood chips, ¼ lb. Brazil wood, and boil for an hour and a half in a gallon of water. Brush the wood several times with this decoction, while hot. Make a decoction of nut-galls, by simmering gently, for three or four days, ¼ lb. of the galls in 2 quarts of water. Give the wood three coats of this, and, while wet, lay on a solution of sulphate of iron (2 oz. to a quart), and, when dry, oil or varnish. 7. Give three coats with a solution of copper filings in aquafortis, and repeatedly brush over with the logwood decoction, until the greenness of the copper is destroyed. 8. Boil ½ lb. logwood chips in 2 quarts of water, add

1 oz. pearlash, and apply hot with a brush; then take 2 quarts of the logwood decoction, add ½ oz. verdigris, and the same of copperas; strain, and throw in ½ lb. iron-rust. Brush the work well with this, and oil.

Blue.—1. Dissolve copper filings in aquafortis, brush the wood with it, and then go over the work with a hot solution of pearlash (2 ounces to a pint of water) till it assumes a perfectly blue colour. 2. Boil 1 lb. of indigo, 2 lbs. of woad, and 3 oz. of alum in a gallon of water. Brush well over until thoroughly stained.

In Imitation of Botany-Bay Wood.—Boil ½ lb. French berries (the unripe berries of the *rhamnus infectorius*) in 2 quarts of water till of a deep yellow, and, while boiling hot, give two or three coats to the work. If a deeper colour is desired, give a coat of logwood decoction over the yellow. When nearly dry, form the grain with No. 8 black stain, used hot; and, when dry, rust and varnish.

Green.—Dissolve verdigris in vinegar, and brush over with the hot solution until of a proper colour.

Mahogany Colour, Dark.—1. Boil ½ lb. madder and 2 oz. logwood chips in a gallon of water, and brush well over while hot; when dry, go over the whole with pearlash solution (two drachms to the quart). 2. Put 2 oz. dragon's blood, bruised, into a quart of oil of turpentine; let the bottle stand in a warm place, shake frequently, and, when dissolved, steep the work in the mixture.

Light Red Brown.—Boil ½ lb. madder, and ¼ lb. fustic, in a gallon of water; brush over the work when boiling-hot, until properly stained. 2. The surface of the work being quite smooth, brush over with a weak solution of aquafortis (half an ounce to the pint), and then finish with the following:—Put 4½ oz. dragon's blood and 1 oz. soda, both well bruised, to 3 pints of spirits of wine; let it stand in a warm place, shake frequently, strain, and lay on with a soft brush, repeating until of a proper colour. Polish with linseed oil or varnish.

Purple.—Brush the work several times with the logwood decoction used for No. 6 black, and, when dry, give a coat of pearlash solution (1 drachm to a quart), taking care to lay it on evenly.

Red.—1. Boil 1 lb. Brazil wood, and 1 oz. pearlash, in a gallon of water, and, while hot, brush over the work until of a proper colour. Dissolve 2 oz. alum in a quart of water, and brush the solution over the work before it dries. 2. Take a gallon of the above stain, add two more ounces of pearlash; use hot, and brush often with the alum solution. 3. Use a cold infusion of archil, and brush over with the pearlash solution used for No. 1 dark mahogany.

In Imitation of Rosewood.—1. Boil ½ lb. logwood in 3 pints of water till it is of a very dark red; add ½ oz. salt of tartar. Stain the work with the liquor while boiling hot, giving three coats; then, with a painter's graining brush, form streaks with No. 8 black stain; let dry, and varnish. 2. Brush over with the logwood decoction used for No. 6 black, three or four times; put ½ lb. iron filings into 2 quarts vinegar; then, with a graining brush or cane, bruised at the end, apply the iron-filing solution in the form required, and polish with bees' wax and turpentine when dry, or varnish.

Yellow.—1. Brush over with the tincture of turmeric. 2. Warm the work, and brush over with weak aquafortis, then hold to the fire. Varnish or oil as usual.

Wood-work, Varnish for Coarse.—Grind any quantity of tar with as much Spanish brown as it will bear without becoming too thick to be used as a paint or varnish. It soon hardens by keeping. The work should be kept as free from dust and insects as possible till the varnish is thoroughly dry. The colour may be made a greyish instead of a glossy brown, by mixing a small proportion of white lead, or of whiting and ivory black, with the Spanish brown.

Wood-worm, or "Death-watch."—Superstitions have been associated with various insects, from the earliest times, and in all countries. The death's-head moth has been regarded as an unwelcome omen to the homes visited by it; and the noise of the death-watch has been affirmed to "click the hour of

death." Swift ridicules the absurd superstition in the following manner :—

"A wood-worm that lies in old wood, like a
hare in her form,
With teeth or with claws it will bite, it will
scratch,
And chamber-maids christen this worm a
death-watch,
Because, like a watch, it will always cry,
click,
And woe be to those in the house that are
sick!
For sure as a gun they will give up the ghost,
If the maggot cries click, when it scratches
the post.
But a kettle of scalding hot water injected,
Infallibly cures the timber affected!
The omen is broken, the danger is over,
The maggot will die, and the sick will
recover!"

The noise is produced by a species of small beetle of the timber-boring genus, *Anobium*. In the spring these insects commence their ticking, as a call to each other. They beat with their heads, and though they are very "head-strong," they are less so (in the common acceptation of the term) than the people who cling to the stupid belief that their sound is a token of common calamity.

Wool.—Though less costly than silk, wool is far more valuable as a textile material. Generally the fabrics made of it are thick and coarse; but, even in respect of textile beauty, really good wool stands very high, and in relation to the power of imperfect heat conduction, or "warmth," as it is popularly termed, wool is far superior to any other textile material.

Wool resembles silk in the property of really taking dye stuff, a property in which linen is deficient, and which cotton possesses only to a limited extent. It has a manifest advantage over silk in washableness, which operation, if properly performed, does no injury to the fabric. "In our days,"—we quote from Dr. Scoffern's "Philosophy of Common Life,"—"woollen fabrics are restricted almost to the dresses of men, and the coarser habiliments of women, but anciently the uses of woollen fabrics were far more extended. Who has not admired, when looking at an ancient Roman or Grecian statue, male or female, to notice the beautiful folds of robing, hanging like festoons on the graceful form? It would be somewhat a violation of terms to denominate these dress festoons drapery, seeing that the material of which the dresses were composed was, for the most part wool. Neither was the wool usually dyed, except for people of great rank. The Tyrian purple, concerning which so much has been said and written, was restricted exclusively to the imperial service. The next most favoured colour was a sort of dull red, the produce of the kermes insect. The reader will do well to remember that no really beautiful dye-stuff was known to the ancient Greeks and Romans, nor to the moderns either, until after the discovery of America, whence we obtain, not only the greater number of our dye-woods, but the beautiful cochineal insect, so much superior to the kermes insect found in southern Europe, and which formerly took its place, that the latter went out of use almost entirely, so soon as cochineal could be procured in adequate quantity."

Wool, and Perforated Card-work.—A very pretty knitting-box may thus be made, with graduated shades of German wool, from dark brown to very light, bright scarlet, coarse perforated card, and some white O. P. beads. Cut out four pieces of the cardboard ten inches long and three inches wide; these are for the bottom of the box, the two sides, and the lid, and must be all the same size; two other pieces, which form the ends, are two squares three inches each way. A very regular and even margin must be left round each piece about half an inch wide. Commence with the dark brown wool, and work a row of squares the whole length of the box, leaving an alternate square uncovered, the same size, upon which, after the wool-work is finished, the white O. P. bead is to be placed. Continue to work these squares of wool in as many shades as will fill up the cardboard; after which, on every alternate square, sew on with a needle and strong white silk, the O. P. bead. After all the six pieces of cardboard are worked in this manner, bind them all round neatly with a narrow ribbon the same colour as the light red wool, and sew them closely together. The handle

is formed of a strip of cardboard, worked in the same manner, and fastened on at each end with a bow of red ribbon. The lid is then sewn on the whole length of the back, and tied in the front with a bow of red ribbon, to match the handle, and then this very pretty and useful adjunct of the work-table is completed.

Wool Weight.—

			cwt.	qrs.	lbs.
7 pounds	=	1 clove	0	0	7
2 cloves	=	1 stone	0	0	14
2 stones	=	1 tod	0	1	0
6½ tods	=	1 wey... ...	1	2	14
12 sacks	=	1 last... ...	39	0	0

Woollen Clothing.—It is not generally understood how clothing keeps the body cool in hot weather and warm in cold. Clothes are, generally, composed of some light substance, which does not conduct heat; but woollen substances are worse conductors than those which are made of cotton or linen. Thus, a flannel shirt more effectually intercepts, or keeps out, heat than a linen or cotton one; and whether in warm or cold climates, attains the end of clothing more effectually. The exchange of woollen for cotton under-shirts in hot weather is, therefore, an error. This is further proved by ice being preserved from melting when it is wrapped in blankets, which retard, for a long time, the approach of heat to it. These considerations show the error of supposing there is a positive warmth in the materials of clothing. The thick cloak which guards the Spaniard against the cold of winter, is also in summer used by him as a protection against the direct rays of the sun; and while, in England, flannel is our warmest article of clothing, yet we cannot more effectually preserve ice, than by wrapping the vessel containing it in many folds of the softest flannel. Black clothes are known to be very warm in the sun; but they are far from being so in the shade, especially in cold weather, when the temperature of the air is below that of the surface of the skin. We may thus gather the importance of attention to children's clothing. It is an absurd idea that, to render young limbs hardy, the body should be exposed to the undue influence of our capricious climate.

Words.—Words are often very little things, and very easily spoken, and yet of what vast importance are they! What bitter anguish one unkind word will sometimes cause. How it frets and irritates the heart long after the careless speaker has forgotten it was ever uttered. And then, again, what inexpressible happiness just one sentence may impart? Often have we looked back upon a few little words of kindness, repeated them over to ourselves, perhaps fondly attaching to them some fancied meaning of our own, lingered lovingly over their sound and intonation, and then carefully deposited them amongst our treasures of memory. The last words of some loved and lost one—how we cling to and treasure them! Memory may fail, in time, to retain the last look; even the beloved features may grow indistinct, and by degrees fade away, but the farewell words remain for ever. Oh, let us be careful of the words we speak!

Words, Proper Use of.—There is as much connection between the words and the thoughts as there is between the thoughts and the words; the latter are not only the expressions of the former, but they have a power to re-act upon the soul, and leave the stains of their corruption there. A young man who allows himself to use one profane or vulgar word, has not only shown that there is a foul spot on his mind, but, by the utterance of that word, he extends that spot and inflames it, till, by indulgence, it will soon pollute and ruin the whole soul. Be careful of your words, as well as your thoughts. If you can control the tongue, that no improper words are pronounced by it, you will soon be able also to control the mind, and save that from corruption. You extinguish the fire by smothering it, or by preventing bad thoughts bursting out in language. Never utter a word *anywhere*, which you would be ashamed to speak in the presence of the most refined female or the most religious man. Try this practice a little while, and you will soon have command of yourself.

Words, The World of.—Soft words soften the soul. Angry words are fuel to the flame of wrath, and make it

blaze more fiercely. Kind words make other people good-natured. Cold words freeze people, and hot words scorch them, and bitter words make them bitter, and wrathful words make wrathful. There is such a rush of all other kinds of words in our days, that it seems desirable to give kind words a chance among them. There are vain words, and idle words, and hasty words, and spiteful words, and silly words, and empty words, and profane words, and boisterous words, and warlike words. Kind words also produce their own image on men's souls, and a beautiful image it is. They smooth, and quiet, and comfort the hearer. They shame him out of his sour, and morose, and unkind feelings. We have not yet begun to use kind words in abundance as they ought to be used.

Wormwood.—This herb grows wild about dunghills and on dry waste-grounds. It is a hardy perennial, and may be propagated by slips in March or October, or raised from seeds sown soon after they are ripe. The leaves have a strong offensive smell, and a very bitter, nauseous taste; the flowers are equally bitter, but less nauseous. Wormwood is a moderately warm stomachic; and for that purpose it was formerly in common use; but it has now given place to bitters of a less ungrateful kind. Wormwood was formerly much used by brewers instead of hops, to give the bitter taste to their malt liquors, and to preserve them. This plant powerfully resists putrefaction, and is made a principal ingredient in antiseptic fomentations.

"Worship."—This is a title that belongs to magistrates and municipal corporations. The corporation of London is "*right* worshipful," others are only "worshipful." "Your worship" is a term addressed to a magistrate sitting in judgment. Even a justice of the peace is entitled to this form of address when engaged in official duties.

Worship, Family.—"The dullest observer," remarks Washington Irving, "must be sensible of the order and serenity prevalent in those households where the occasional exercise of a beautiful form of worship in the morning gives, as it were, the key-note to every temper for the day, and attunes every spirit to harmony."

"First worship God; he that forgets to pray,
Bids not himself good morrow, nor good day."

Wounds, Healing Ointment for.—Take a quarter of an ounce of white wax, and half an ounce of spermaceti (which is a hard white material), and put them in a small basin, with two ounces of almond oil. Place the basin by the side of the fire, till the wax and spermaceti are dissolved. When cold, the ointment is ready for use. This is an article which it is much better to make than to purchase. When you make it yourself, you know that it has no irritating or inferior materials in it.

Writing.—Writing, when properly managed, is but a different name for conversation. The habit of committing our thoughts to writing is a powerful means of expanding the mind, and producing a logical and systematic arrangement of our views and opinions. It is this which gives the writer a vast superiority, as to the accuracy and extent of his conceptions, over the mere talker. No one can ever hope to know the principles of any art or science thoroughly who does not write as well as read upon the subject. In letter writing we should adapt the style of our writing to the capacity of the person it is addressed to; for as a person of inferior understanding will misconceive, so persons of inferior sentiment will probably mistake the intention from an elegance of expression. Remember, too, that an angry letter is always written one day too soon. (See *Letter Writers, Hints to.*)

Writing, Careless.—Important interests may be sacrificed, and immense advantages lost, by not learning to write a distinct and legible hand. Sir Walter Scott, while he represents Francis Osbaldistone's father as a steady merchant, makes him criticise closely the handwriting of his son's letter, and to complain especially, that his *l*s are left without loops, and want, beside, the relative height that ought to distinguish them from *t*s. It has been somewhere mentioned of a gentleman, whose will expressed that his property was to be

left to a Mr. London, or a Mr. Loudon, both residing in the same town, but by no means intimate; and that legal proceedings decided in favour of Mr. Loudon, merely because the testator was once seen to speak to him, and because no such evidence appeared in favour of Mr. London. The case occurred on account of the unintelligible handwriting of the testator, whose *n*s were like *u*s, and whose *u*s were like *n*s. This is only one of the many mistakes in the writing of proper names, which have deprived rightful owners and deserving persons of their property; and this is alone to be avoided by learning to write well in the first instance, and by always writing carefully afterwards. Besides, careless, slovenly, illegible writing is disrespectful to those to whom it is addressed, and inconsiderate of their waste of time in deciphering it.

Writing Materials, Ancient. — Books were extremely rare among the Scandinavian and northern nations. Before their communication with the Latin missionaries, wood appears to have been the material upon which their *runes* were chiefly written; and the verb *write*, which is derived from a Teutonic root, signifying to *scratch* or *tear*, is one of the testimonies of the usage. The Cymri adopted the same plan. Their poems were graven upon small staves or rods, one line upon each face of the rod; and the old English word, *stave*, as applied to a stanza, is probably a relic of the practice, which, in the early ages, prevailed in the west. In the east the custom still subsists; the slips of bamboo upon which the inhabitants of the Indian Archipelago now write or scratch their compositions with a bodkin are substantially the same with our ancient staves. Vellum or parchment afterwards supplied the place of these materials. Real paper, manufactured from the pellicle of the Egyptian reed, or "papyrus," was still used occasionally in Italy, but it was seldom exported to the countries beyond the Alps; and the elaborate preparation of the vellum, upon which much greater care was bestowed than in the modern manufacture, rendered it a costly article: so much so, that a pains-taking clerk could find it worth his while to erase the writing of an old book, in order to use the blank pages for another manuscript. Books thus re-written are called *codices rescripti* or *palimpsets*. The evanescent traces of the first layer of characters may occasionally be discerned beneath the more recent text which has been imposed upon them; and some valuable fragments of the ancient classical writers have been lately recovered from such volumes by the patient diligence of foreign antiquaries.

Writing, Statistics of.—Here are some curious calculations about writing:—A rapid penman can write 30 words in a minnte. To do this, he must draw his quill through the space of one rod—16½ feet. In 40 minutes his pen travels one furling; and in five hours and a third, one mile. We make, on an average, 16 curves or turns in writing each word. Writing 30 words in a minute, we must make 488 to each second; in an hour, 28,000; in a day of five hours, 140,000; in a year of 308 days, 43,200,000. The man who made one million strokes with a pen, in a month, was not at all remarkable. Many men make four millions. Here we have in the aggregate a mark *three hundred miles long*, to be traced on paper by each writer in a year. In making each letter of the alphabet, we must make from three to seven strokes of the pen, and, on an average, from three and a half to four.

Xerxes, Sentiments of.—It is said of Xerxes, that when he stood upon a hill, and saw the whole country round him covered with his army, he burst into tears, to think that not one of that multi tude would be alive a hundred years after.

"Yankee," Origin of the Word.—Yankee is the Indian corruption of the word "English"—"Yenghees," "Yanghees," "Yankhees," and finally "Yankee." It got into general use, as a term of reproach, thus:—About the year 1713 one Jonathan Hastings, a farmer at Cambridge, New England, used the word Yankee as a cant word to express excellence—as a

Yankee (good) horse, Yankee cider, &c. The students at the college having frequent intercourse with Jonathan, and hearing him employ the word on all occasions when he intended to express his approbation, applied it sarcastically, and called him "Yankee Jonathan." It soon became a cant phrase among the collegians, to designate a simple, weak, and awkward person; from college it spread over the country, till, from its currency in New England, it was at length taken up and applied to the New Englanders generally as a term of reproach. It was in consequence of this that the song called "Yankee Doodle" was composed.

Yawning.—Why do we yawn? Because, as we become weary, the nervous impulses which direct the respiratory movements are enfeebled. It has been said that these movements are involuntary, and that the parts engaged in producing them are not subject to fatigue. But the operation of breathing is to some extent voluntary; though, when we cease to direct it voluntarily, it is involuntarily continued by organs which know no fatigue. When, therefore, we feel weary—still controlling, or breathing, in our efforts to move or to speak—there frequently arrives a period when for a few seconds the respiratory process is suspended. It seems to be the point at which the voluntary nerves of respiration are about to deliver their office over to the involuntary nerves; but the pause in the respiration has caused a momentary deficiency of breath, and the voluntary nerves of respiration, coming suddenly to the aid of the lungs, cause a spasmodic action of the parts involved; and a yawn, attended by a deep inspiration, to compensate for the cessation of breathing, is the result.

Year and the Months, The.—Properly so called, the year is that portion of time which elapses while the sun passes through the twelve signs of the zodiac (*which see*), or while the earth revolves completely round the sun in its orbit; and while each hemisphere is turned alternately, once towards, and once from the sun, thus constituting the distinction between summer and winter. The twelve calendar or civil months were so arranged by Cæsar, while reforming the calendar, that the odd months—the first, third, fifth, and so on—should contain thirty-one days, and the even numbers thirty days, except in the case of February, which was to have thirty only in what is termed leap-year, while in other years it was assigned twenty-nine days only, a number which it retained till Augustus Cæsar deprived it of another day.

The names of the twelve months are entirely Roman:—*January* is derived from Janus, a god who reigned over the beginning of all undertakings; hence his name is appropriately applied to the first month in the year. *February*, from *februo*, "I purify," because in that month funeral lustrations were performed. *March*, from Mars, the father of Romulus. *April*, from *aperire*, "to open," in allusion to the budding of vegetation. *May*, from Maia, the mother of Mercury, to whom sacrifices were offered on the first day. *June*, from Juno. *July*, in honour of Julius Cæsar. *August* in honour of Augustus. *September*, *October*, *November*, and *December*, respectively signifying seventh, eighth, ninth, and tenth, are the names which were employed when the Roman year consisted only of ten months, and began with March.

Yeast.—Besides being a well-known agent in bread-making, yeast is sometimes employed as a medicine for the relief of tremors, spasms, delirium, and other symptoms of irritation. It was at one time in great repute in putrefactive disorders. A son of the Earl of Essex was given over by Dr. Willis, in typhus fever, and afterwards restored by sponging the body with vinegar and using yeast internally. The best-known mode of administering yeast is in an infusion of malt. A teaspoonful of yeast is mixed with a pint of strong wort, and the vessel then covered close, and placed near a fire. In less than an hour it is covered with a white cap of yeast, and should be drunk in that state.

Yeast, To make.—To any quantity of water desired (we quote from "The Country Gentleman's Magazine") add

sufficient hops to make it very strong, and let it steep slowly two or three hours. Then boil it a few minutes, strain out the hops, put the liquor back in the kettle, let it boil moderately, and add flour until a stiff batter is formed. When thoroughly scalded, put it in a jar to cool, and while a little warm, add yeast to ferment it. When well fermented, add to two quarts of the yeast half a teacupful of salt. Keep it in a cool place. A tablespoon twice filled will make sponge for a half-dozen loaves of bread. Yeast made in this way will not sour. Or boil one ounce of hops in a gallon of water until it is reduced to half a gallon, then strain it off through a hair sieve, and pour it boiling hot on a half quartern of flour, stirring well all the time; mix in two tablespoonfuls of moist sugar; when lukewarm, add half a pint of old yeast to quicken, keeping it in a warm place while making. If no old yeast is at hand, half a pint of old ale will answer to quicken, or an ounce of German yeast. When made, reserve half a pint by bottling, and keep it in a cool place for your next making.

For the following recipe, which introduces potatoes as an excellent leaven for making wheaten bread, a patent was obtained by the inventor (Mr. Richard Tillyes Blunt), which is now expired. The following is copied from the original specification in the Patent Office, London: "To make a yeast-gallon of this composition, such yeast-gallon containing 8 beer quarts, boil, in common water, 8 lbs. of potatoes, as for eating; bruise them perfectly smooth, and mix with them, while warm, 2 oz. of fine honey, and 1 beer-quart of common yeast. For making bread, mix 3 beer-pints of the above composition with a bushel of flour, using warm water in making the bread; the water to be warmer in winter than in summer, and the composition to be used in a few hours after it is made; and so soon as the sponge, or the mixture of the composition with the flour, begins to fall the first time, the bread should be made and put into the oven."

The following are good substitutes for brewers' yeast:—(1) Boil 1 oz. of hops in 4 quarts of water, until the hops fall to the bottom of the pan; strain it, and when milkwarm add 6 ounces of flour, and 5 of sugar; set the mixture by the fire, stirring it frequently; in forty-eight hours add 4 lbs. of potatoes, boiled and bruised fine: next day bottle the yeast; it will keep a month. One-fourth of yeast, and three of warm water, is the proportion for baking. (2) Boil 1 lb. of good flour, a quarter of a lb. of brown sugar, and a little salt, in 2 gallons of water for an hour; when milk-warm, bottle and cork it close, and it will be fit for use in twenty-four hours. 1 lb. of this yeast will make 18 lbs. of bread.

To remove the bitterness from yeast, produced from highly hopped beer, put a glowing (red hot) lump of charcoal, about the size of a large hen's egg, in, say a pint of bitter yeast, and, after giving the yeast a good stir, strain it through a fine horse-hair sieve, when it will become perfectly palatable.

Young, Counsels for the.—Never be cast down by trifles.

If a spider break his thread twenty times, twenty times will he mend it again.

Make up your mind to do a thing, and you will do it.

Fear not if a trouble come upon you; keep up your spirits, though the day be a dark one.

If the sun is going down, look up to the stars; if the earth is dark, keep your eye on Heaven. With God's promises, a man or a child may be cheerful.

Mind what you run after. Never be content with a bubble that will burst.

Get that which you can keep, and which is worth your keeping.

Fight hard against a hasty temper.

Anger will come, but resist it strongly.

A fit of passion may give you cause to mourn all the days of your life.

Never revenge an injury. If you have an enemy, act kindly to him, and make him your friend. You may not win him over at once, but try again. Let one kindness be followed by another till you have compassed your end.

By little and little, great things are completed; and repeated kindnesses will soften the heart of stone.

Whatever you do, do it willingly.

A boy that is whipped to school never learns his lesson well. A man who is compelled to work cares not how badly it is performed.

He that pulls off his coat cheerfully, strips up his sleeves in earnest, and sings while he works, is the man of action.

Young Plants and Seedlings, How to Purchase.—Many people buy stocks, asters, hollyhocks, dahlias, penstemons, antirrhinums, pansies, and such like, from nurserymen and florists, who get them up for sale, to supply an ever-increasing demand for showy flowering plants for immediate planting. To these might be added such things as are kept over the winter, by cuttings, as verbenas, geraniums, calceolarias, and some other flowering plants. As a rule, they are got up upon the high pressure or extreme forcing principle, and require cautious nursing, or protecting when transferred to new quarters.

Too many buyers run upon the salesman with great avidity, at too early a period of the season. Hence many of the plants die, and there is nothing but dissatisfaction to all parties. If buyers, as a rule, when they have received their lots, would plant them temporarily close together in any salient spot, and in the event of cold weather prevailing during May, if a cover of some kind were provided, they would be great gainers. The plants would get hardened off sufficiently to bear isolation with impunity, and the yield in growth and flowers would be correspondingly increased. To proceed upon the assumption that, because a buyer has got so many plants there ought to be so much outcome, without taking precautionary measures, is certain to end in discomfiture and defeat. Caution is requisite in this, as in every other step one takes in life, to secure propitious sequences. Early planting, without regard to the constitution of the plants, and the fluctuating character of the month of May, and even the early weeks of June, may end in a late harvest of flowers, even if that can be reckoned upon at all. Pansies, penstemons, and antirrhinums form an exception to the others named, and may be safely planted in April and May, according to the climate of the locality.

Youth, Advice to.—Bestow thy youth that thou mayest have comfort to remember it when it hath forsaken thee, and not sigh and grieve at the account thereof. Whilst thou art young, thou wilt think it will never have an end; but behold, the longest day hath its evening, and that thou shalt enjoy it but once, that it never turns again; use it, therefore, as the spring-time, which soon departeth, and wherein thou oughtest to plant and sow all provisions for a long and happy life.

Youth, an Example for.—"I learned grammar," said William Cobbett, who became an eminent printer and writer, "when I was a common soldier on sixpence a day. The edge of my guard-bed was my seat to study on; my knapsack was my book-case, and a board lying on my lap was my desk. I had no money to buy candles or oil; in winter, it was rarely that I could get any light but that of the fire, and only my turn even to that. To buy a pen or a sheet of paper, I was compelled to forego a portion of my food, though in a state of starvation. I had no moment at that time that I could call my own, and I had to read and write amid talking, singing, whistling, and bawling, of at least half a score of the most thoughtless of men, and that too, in hours of freedom from control. And I say if I, under circumstances like these, could encounter and overcome the task, can there be in the whole world a youth who can find excuse for non-performance?"

Yule Log.—Few people know anything of the old Christmas custom of "bringing in the Yule Log." This custom of burning the Yule Log, has, it appears, an Anglo-Saxon origin. That race of people were in the habit of celebrating a feast at the winter solstice, which they called the Juul or Yule, and on this occasion, they were wont to burn a large log of wood, as an emblem of returning light and heat, the sun being then at its farthest point from them. From that feast, the burning of the log became transferred to the eve of Christmas Day, and, as such, was

never omitted up to the early part of the present century. It is now rarely met with, and then only in very remote rural districts.

The Yule Log was the stem of one of the largest trees that could be found on the estate of the proprietor in whose hall it was to raise its cheerful flame.

Zinc, Oxide of.—This preparation is sometimes called the Flowers of Zinc, and is employed as a tonic and antispasmodic medicine. In epilepsy, hooping cough, and asthma, it is very valuable. It may be given in these or other spasmodic diseases, in doses of from two to eight grains, twice or thrice a day, made into pills, with extract of gentian.

The other preparations of zinc are, the sulphate, the acetate, and chloride. The last is a powerful caustic, penetrating deeper than the nitrate of silver, and, besides corroding the parts to which it is applied, it exercises a peculiar influence over the vital actions of other parts. As an application in cancer it is of acknowledged value. The acetate of zinc is used with success in chronic inflammation of the eye.

Zoophytes.—These are plant-animals, a term commonly applied to corals, sponges, and the like, from their apparently hovering in character between plants and animals, or externally resembling plants, in zoology. Their marked character is that of a small animal or polype, consisting of a stomach, and a mouth surrounded by organs for holding, or *tentacula*. There are several orders and classes of zoophytes.

Zoophaga.—A section of animals which prey upon *living* animals.

Zoology.—A term for the science of animals — that branch of natural history which treats of the structure, habits, classification, habitations, order of succession, and distribution of all animals, from the lowest of animal creatures to man, according to their outward characters, those peculiarities of structure which most conspicuously distinguish them. The zoologist aims at giving each species of animals a name by which it may be distinguished.

Zodiac.—An imaginary zone or belt in the heavens, extending to about 8° or 9° on each side of the ecliptic, which divides it in the middle, embracing the region within which the apparent motions of the sun, moon, and all the greater planets are confined. The zodiac is divided into twelve signs or constellations, namely:

Aries, the Ram.
Taurus, the Bull.
Gemini, the Twins.
Cancer, the Crab.
Leo, the Lion.
Virgo, the Virgin.
Libra, the Balance.
Scorpio, the Scorpion.
Sagittarius, the Archer.
Capricornus, the Goat.
Aquaries, the Water-bearer.
Pisces, the Fishes.

This division of the zodiac affords a ready means of pointing out the place of a planet, or of the sun or moon at any particular time, by telling in what sign it is.

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Butler & Tanner, The Selwood Printing Works, Frome, and London.